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ABSTRACT

Six papers presented at the Scottish Council for Research in Education's 50th anniversary conference in 1978 are included. "Are Standards Rising?," by W. Bryan Dockrell, examines the use of national performance assessment surveys in Scottish schools. "Better Reports," by Patricia M. Broadfoot, describes the need for a comprehensive assessment instrument for Scottish students, and how the Pupil Profiles Project can satisfy this need by providing for existing certification requirements, as well as making positive statements for less able students. "Testing as Teaching," by Harry D. Black, describes a case study dealing with the creation of diagnostic assessment instruments, and emphasizes the need to move away from the idea that assessment is a judgment. "Do People Get What They Want or Want What They Get in Terms of Pre-School Provision?," by Jenny Haystead, discusses the different ways of transmitting information to mothers about facilities for pre-school children. "Choice and A Core Curriculum," by A.C. Ryrie, examines the process by which young people from the age of 12 move up through the Scottish 6-year comprehensives. "Home and School Influences on Getting a Job," by A. Douglas Weir, discusses factors which influence job seeking behavior. (RI)

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RESEARCH IN THE SERVICE OF EDUCATION

Papers presented at the SCRE 50th Anniversary Conference London, December, 1978

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RESEARCH IN THE SERVICE OF EDUCATION

Papers presented at a Conference in London,
on 8th December, 1979, to mark the
50th Anniversary Year of The Scottish Council for
Research in Education

THE SCOTTISH COUNCIL FOR RESEARCH IN EDUCATION

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C O N T E N T S

ARE STANDARDS RISING?
W B Dockrell

BETTER REPORTS
P M Broadfoot

TESTING AS TEACHING
H D Black

PRE-SCHOOL PROVISION - DO MOTHERS GET WHAT THEY WANT OR WANT WHAT THEY GET?
J Haystead

CHOICE AND A CORE CURRICULUM
A C Ryrie

HOME AND SCHOOL INFLUENCES ON GETTING A JOB
A D Weir

ARE STANDARDS RISING?

W BRYAN DOCKRELL

There has, in recent years, been a revival of interest in the question of standards. There has been concern about standards in both primary and secondary schools; in primary schools because of the introduction of what we still think of as progressive teaching methods and in secondary schools because of the raising of the school leaving age and the change to comprehensive organisation. It is worth noting that there has been similar concern in the United States for some time now though the bases of the concerns are somewhat different.

One response to the concern has been the development of survey testing. In the words of the Department of Education and Science's Assessment of Performance Unit's leaflet entitled "Assessment:- Why, What and How"[1] the intent is to provide "such information not only to describe the current position but also to record changes as they occur". That leaflet suggests that there are three major purposes for surveys of performance. First, "the outcome of tests will enable the APU to make parents, employers and others concerned better informed about the achievements of schools". Such information would, second, "help determine national policy including decisions on the deployment of resources and third, help teachers in planning the balance of pupils' work in schools, without an attempt at national level to define detailed syllabus content". The leaflet states clearly and simply what the purposes of survey testing are.

Such surveys have been carried out in Scotland for some time now and I think it may be useful to look both at the results of those surveys and the use to which such findings can be put.

The first Scottish Scholastic survey was carried out in 1953[2] when tests of English and arithmetic were administered to over 72,000 ten year olds in grades 5 and 6. The survey faced the three fundamental questions - why, what and how? Why should a survey be carried out, what was to be tested, how was it to be tested? The survey was carried out "to indicate the amount of acceleration and retardation in the school system; the relative educational standards of urban and rural schools; of schools of different sizes and of schools organised on individual as compared with class methods". It was easy in those days to decide what was to be tested. It had originally been intended that only arithmetic should be included in the survey. However, it was later decided to take advantage of the opportunity to include English as well. At that date apparently the importance of arithmetic (mechanical and reasoning) and English (usage and comprehension) was self evident and did not need to be explained. The how question was answered equally simply. It was to be administered to all pupils born between the 5 July 1942 and 30 June 1943.

Ten years later a further survey was carried out[3]. By 1963 there was more sophistication in the research design. Indeed in the report on that survey there is a whole chapter on experimental design which focusses on such questions as sampling. By this time it had been recognised that samples would provide as reliable information as the testing of the whole population. Consequently rather fewer then 5,000 pupils were tested instead of the earlier 72,000. What is more it was a stratified random sample representative of the cities, large towns, small towns and other areas and grant aided and independent schools. Within the strata were

drawn samples from schools of different sizes. The same tests were administered as in 1953. No further justification of the survey was given other than that "valuable information could be collected if the scholastic attainment test used in 1953 were given again in 1963".

An as yet unpublished national survey of standards in primary schools included a test of mathematics which was administered to a random sample of children in Primary 4 and Primary 7 in June 1978*. It is important to note that in the case of children tested in 1978, the basis for selection was grade, not age. On average, therefore, the P7 children tested in 1978 were a year and a half older than those in the two earlier surveys.

There is therefore national data for 1953, 1963 and 1978 albeit not for the same age and grade groups.

In addition to the national surveys there was a survey in the area of one education authority (Stirlingshire) of pupils in Primary 6[4]. Tests were set to all children in a sample of 20 classes in February 1974. Their average age was 10 years and 7 months. In 1978 the survey was repeated in the area of the new Central Region which incorporated most of the former Stirlingshire and some other districts[5]. This time a total of 27 classes took the same arithmetic test as in 1974. The comparisons I shall report later are between the pupils drawn from the common area. That is that part of Stirlingshire which is now part of the central region.

The group of primary 6 children tested in 1974 was in 1978 in S3 year of secondary schools. Of the original sample of 474 pupils it proved possible to trace 452 in the central region. The missing 22 pupils covered the whole ability range in terms of performance in the 1974 testing and there were no significant differences between the groups. This group had the original test administered to them in February 1978. Thus it is possible to make comparisons between primary 6 pupils in 1974 and 1978 and between the performance of the first group of pupils when they were in primary 6 and secondary 3.

Surveys are not the only source of information about standards. There are two other sets of data to which I will refer. The first is the data we obtained from re-norming the Graded Word Reading Test. Scottish norms had first been obtained in 1938 by Professor P E Vernon[6]. In 1952 new norms were obtained and were used until the 1974 revision. In June 1974[7] the test was administered to a random sample of pupils in each of the seven years of the Scottish primary school.

Most of this systematic evidence refers to the primary schools. There is some evidence concerning secondary schools from the numbers of pupils taking school leaving examinations. In Scotland there is only the one Scottish Certificate of Education Examination Board which administers tests at ordinary and higher grade. Results of examinations such as these are often discounted on the grounds that standards might have shifted over the years. To check on this possibility the Scottish Board included in the most recent higher chemistry paper objective items from some years previously. The proportion passing the items in 1978 was slightly higher but not significantly different from those passing on the previous

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* Primary School Survey Project, 1978.
(Analyses still in progress)

occasion. Thus we have no evidence that standards have changed and we can be reasonably sure that they are the same in at least chemistry. Changes in the number obtaining passes would therefore be at least prima facie evidence of changes in levels of achievement.

So far I have merely given you the sources of the evidence. What do all these sources indicate? The detailed findings are reported in a range of publications. Let me simply summarise them here. Changes between 1953 and 1963 are reported in the title of the second book, Rising Standards in Scottish Schools[8]. There had been a significant increase in the score on each of the tests - mechanical arithmetic, arithmetical reasoning, English usage and English comprehension.

Data from the 1978 survey show a similar trend. For the basic skills the proportions passing in each of the years 1953, 1963 and 1978 were approximately the same and in some cases with pass rates of over 80%, clearly close to saturation point. Other items however, showed large increases in the proportion passing in 1978. These were problem items and items involving fractions. Two items however - those requiring calculations involving hours and minutes rather than hours and fractions of hours - showed a substantial decrease.

The regional survey showed much the same. Between 1974 and 1978 there was no general change in performance except on one item and that involving notation. When more detailed analysis in terms of level of pupil ability was carried out it emerged that the least able group showed a significant improvement in performance on basic rules, and the very able group an increase in performance on items involving metric measures. Between 1974 and 1978 the re-tested group had as one might expect showed substantial increase in all aspects of arithmetic measured by the test. The proportion getting all the items correct in any one aspect of arithmetic had increased substantially and the proportion getting no answers correct had declined. The report summarised its findings by saying "it is clear that considerable gains in performance have occurred from 1974 to 1978 over a broad range of arithmetic not only in terms of performance but also in terms of both extremes of the ability ranges".

The word reading test on the other hand showed remarkable stability. The mean level of attainment at each age was almost exactly the same in 1938, 1952 and 1974 though of course there was considerable change in the order of difficulty of particular words.

At the secondary level the evidence is of continuing increase in the proportion of school pupils reaching any given level of attainment. In Scotland school leavers with three or more O grade passes are technically described as 'qualified school leavers'. In 1964 34% of the leavers reached this standard of whom 16% had 1 or more highers. In 1974 60% of school leavers reached this standard and 28% passed 1 or more highers. The numbers of pupils obtaining passes both at Ordinary and Higher level have continued to rise since, particularly in maths and science subjects.

The evidence is so consistent that one might almost feel that some degree of quiet confidence was called for if not outright self congratulation, and yet strangely the doubts are not stilled. For example, in the next issue of Consultative Committee on the Curriculum News[9] which goes to all Scottish teachers there is an article by the Chairman

of the Scottish CBI expressing his doubts about the standards in Scottish schools in spite of the formal evidence to the contrary. Such surveys which "describe the current position - also record changes as they occur" do not seem to meet the needs of parents, employers and others.

There are I think two reasons for this. I referred above to the report Rising Standards in Scottish Primary Schools. It was not a best seller even in Scotland. The reason I think is that good news is no news. If we had produced a report called "Falling Standards" we would have attracted articles in the newspapers, letters in the correspondence columns and the wrath of the teachers. Probity in public life and decency in private conduct do not make the headlines nor does a commendable level of professional attainment.

The second reason why these findings did not attract attention is one which the researchers can do something about. When we were first approached to collaborate with Stirlingshire County Council in carrying out its survey of standards in primary schools, the Director of Education was too sophisticated a man to say that there was concern in his area about the standards of the schools which he was anxious to allay. Rather he asked us to find out what the standards were. However, after some discussion it was agreed that much of the problem was one of parental understanding of what the schools were trying to do and how they were trying to do it.

Consequently a procedure was devised which had a number of components. One was the survey of standards in arithmetic and reading, the other was an attempt to explain to the people of Stirlingshire the nature and purposes of the modern primary school. This included a collection of dossiers of pupils' work in 5 of the 20 schools involved in the survey in order to provide an impression of the range of work tackled by Primary 6 children. In addition to the dossiers teachers were asked to record examples of musical or speech work and photographs were taken of physical education and craft work. This was the basis of an exhibition which was prepared which tried to portray the full range of primary school life. In addition to this, two tape slide presentations were made to give a coverage of the creative work of the schools, and two audio tapes - one of a town school, one of a rural school - were prepared to try to put life in the primary school into the contemporary audio visual idiom. Finally, there was a formal analysis of the resources available to the schools in the survey - the curriculum planning, staff deployment, the use of specialist teachers, the provision of remedial assistance, provision of equipment and the programme of testing and assessment. Teaching methods were described, library provision reported and a variety of classroom arrangements shown in diagrams and photographs.

The intent was to answer the fundamental question of the parents. Parents want to know that apparently random play activities in primary 1 or field studies in Secondary 4 are carefully thought out parts of an overall programme making specific contribution to their children's learning. They also need to be reassured that the schools their own children attend are providing the same opportunity as are available to others. Surveys of national standards do not inform them on either of these points.

Similarly employers are not interested in comparative standards but in what the youngsters who come to them actually know. For this reason the arithmetic test which was produced for the survey was not norm

referenced, that is it was not designed to indicate where a particular pupil fell in the continuum of achievement, but "criterion referenced" - designed to indicate what all pupils or most pupils or the top ten per cent of pupils could achieve. Employers need to know as a basis for discussion with educational authorities what arithmetic and what communication skills the schools are trying to teach and the specific attainments of particular applicants for jobs. The findings of national surveys do not make a great impact on parents and employers because they do not provide them with the information they want.

The second justification for surveys offered in the Assessment of Performance Unit's leaflet referred to on page was that they contribute to national policy. The major conclusion drawn from the first Scottish Scholastic Survey was that "in the first place it has been shown that a scholastic survey on a national scale is possible with the goodwill of teachers and administrators" (which rather reminds me of Dr Johnson's comment about a woman preaching a sermon, the wonder is that it could be done at all). The authors however, went on to point out wisely that "the survey has also shown the difficulties of which the principal one is the diversity of work normally professed by an age group. At the ten year old level chosen for the survey this was particularly evident in the subject of arithmetic where the complicated British tables of money, length and weight were introduced in different ways at different times and in different areas. It will be folly to attempt to standardise curricula in this field until it has been shown that one method is superior to others". This quotation highlights two issues for those wishing to attempt national surveys. The first is the great variation in attainments in subjects which reflects not long term differences but short term consequences of different teaching methods. The second is the danger of a backwash in the schools. If there are standards examinations which are to be administered nationally, is it to be assumed that these define a national curriculum in the way that the examinations of the Examination Board define a national curriculum? Schools will be under pressure to adopt this putative national curriculum.

Most of the conclusions from the 1953 survey refer to teaching practice and I will refer to them later. The 1963 survey however, went beyond this to draw attention to evidence relevant to certain national policy issues. It pointed out that "areas still using attainment tests at the transfer stage show gains about twice as large as those in other areas. Little or no association was found between attainments in the Arithmetic test and the use of Cuisennaire methods. Higher attainments in the English test go with greater provision of school libraries. No association was found between attainments and the shortage of teachers", and a little further on there is the reiteration of a point made in the earlier report "when one considers the extent to which Scots of some kind is spoken and understood one can only conclude that Scots in print is completely unfamiliar to three quarters of the pupils in this age group. It would appear desirable to include printed Scots among the reading material for Scottish children".

There were too some negative but reassuring findings about the differences among the four types of areas (cities, large towns, small towns and other areas). These differences were small and not as important as were the differences in achievement of pupils in different geographical regions. Pupils from smaller schools obtained practically the same standards as those in large schools. The pupils from one-teacher schools reached the same standards as those obtained by pupils in schools with more than six teachers.

What impact did these findings have on national policy? What impact should they have had? Are we to retain or return to attainment tests at the transfer stage because they are related to higher standards on tests of the kind used in the surveys? Do we dismiss using Cuisennaire rods on the evidence of the survey? How many more primary schools libraries were established because of this evidence? What should our policy be on closing small schools? Where the survey did provide significant evidence it has been largely overwhelmed by other more general considerations and by a recognition that what primary education is meant to achieve is not adequately measured by formal tests.

As the authors of the 1953 report wisely point out " survey data throw no light on the important issue of class size. It seems clear that any investigation of this problem must not accept the given structure of classes with size already determined by administrative needs but must be specifically designed to test the effects of varying size of class", a conclusion which has relevance to the findings of the later studies. It might well be applied to Cuisennaire rods, school libraries and school size. Indirect evidence from surveys is partial and evidence in these and many other issues must be obtained from experimental studies. What the Scottish Scholastic surveys have shown is the need for experimental evidence, which speaks to precise policy issues and not general findings which may or may not be valid and which may or may not outweigh other considerations like, for example, cost and convenience.

What of the impact on teaching practice? At the end of the first survey the panels reached definite conclusions: on arithmetic, "1, division by factors is undesirable in primary schools; 2, more attention should be paid to the lay out of short division sums; 3, there is need for standardising the notation used in recording the time of day by the clock; 4, the use of written work in Arithmetic facilitates accuracy; 5, a standard practice is required for recording remainders in division; 6, it was evident that the various aspects of teaching Arithmetical problems required further consideration e.g. the need for accurate reading of the question". On English, "1. The tests ..... demonstrated the need for persistent oral practice in accepted speech forms, and a restrained use of pencil-and-paper exercises for occasional testing .....; 2. Reading as a thought process seemed insecure. It is possible that acquaintance with the forms of verbal testing and the common use of reading text-books with exercises make it all too easy to suppose that pupils working through a series of questions have understood what they are reading. The tests in this survey showed unmistakeably that many pupils dealing as well as they could with details have not first grasped the general meaning of what they had read". What were the consequences of this specific advice to teachers? Did many schools cease division by factors or pay more attention to the lay out of short division sums or provide persistent oral practice in accepted speech forms? If they did how many teachers would now think that was good advice?

As with the more general issues the specific recommendations relate to a particular perception of the purposes of schools which is not now so widely held. Even for those who do accept the assumptions of the authors how does a particular teacher know whether the more attention which should be paid nationally to the lay out of short division sums applies to her class? Is she already providing more attention than the average and therefore need not provide more and might indeed provide less? Or is it likely that those who are already giving considerable attention to the lay out of short division sums feel strengthened in their conviction

and give even more? Will those who are not giving sufficient attention overlook this point in the recommendation of the report? The findings may or may not apply to any particular teacher and whether any teacher will take account of them will depend very much on their own values and their own perceptions of their current practice.

A teacher's decision about the emphasis given to science or social studies, reading or arithmetic is much more likely to be based on his own experience of the situation around him than on any information that the nation as a whole did well or badly in tests of science or social studies or in physics as compared with chemistry, or geography as compared with history. Individual teaching decisions are, I suggest, not made on this basis but on the basis of specific information which relates to the teacher's own objectives and the circumstances in which he is operating.

The concern of teachers is rarely with standards as a whole. Their interest is in the standards of their own pupils as compared with those of other teachers and other schools.

There is a risk that national surveys will accidentally result in the standardisation of curriculum which the authors of the report of the 1953 survey thought would be folly. There is a risk that inspectors and advisors, college lecturers and teacher centre directors will accept a new orthodoxy buttressed by the findings of national surveys.

A comparable risk is that those aspects of the purposes of schools which are not included in the surveys, personal and social development, aesthetic and physical development will be neglected in the interests of those which are measured. There will be a temptation to define the objectives of education in terms of what can be tested. It is reassuring to note that the Scottish National Primary Survey is concerned about life in schools as a whole and includes as a part of its work the survey of attainment in Arithmetic and Reading. Similarly, the regional survey contained what the Director of Education referred to as a "wealth of useful and searching comment on schools and curriculum organisation". The surveys proposed by the English assessment of performance unit includes, language, mathematics and science, but also social, aesthetic and physical development. The broader range of school objectives is recognised.

The question in the title of this paper which was given to me by my colleague is not answered simply by the results of national surveys. We must first ask what standards. Standards in arithmetic and reading and in the formal subjects of the curriculum yes, but are we more successful in fostering artistic creativity and aesthetic enjoyment, personal satisfaction and social commitment? In a recent national report, The Structure of the Curriculum, Dr Munn and his colleagues outlined four sets of aims of education. We must be careful that our ability to assess two of these sets does not lead us to neglect the other and possibly more important aims.

Twenty five years of surveys of standards in Scotland, the United States and more recently France and elsewhere have provided us with a firm base for certain conclusions.

The first is that such surveys can be carried out economically and with very little disturbance to the schools and pupils in the system. The

general conclusion from the Scottish surveys is that standards have been rising steadily over the last 25 years. Second, surveys are most easily made in the fields of basic skills and knowledge and there is therefore a danger of emphasising the formal measurable aspects of the curriculum to the detriment of the equally important less easily defined and less easily measured aspects. Third, the information provided by such surveys rarely meets the concerns of parents or employers. Parents want reassurance about the education of their own children and employers want information about the skills and knowledge of applicants for particular jobs in absolute not relative terms. (In the jargon criterion-referenced not norm-referenced.) Fourth, information from such surveys on policy issues, indeed in my opinion from survey studies in general, is always partial frequently misleading and often downright wrong. Experimental studies are required. Fifth, conclusions drawn about teaching with the system as a whole are not directly applicable to any particular teacher or school. Care should therefore be taken about implementing changes suggested by surveys.

In short the findings of surveys are national and general not local and specific and these limitations must be accepted. This does not mean to say that surveys make no contribution to our knowledge of the system. Rather they cannot meet all the needs that can be met by educational research nor fulfil all its purposes. Surveys like the ones to which I have referred have made a significant, an important contribution to our knowledge but a specific and a limited one. A programme involving different styles of research, each making its own contribution, is necessary. By the end of this conference we hope to have illustrated the diversity of contributions that can be made by a range of approaches.

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BETTER REPORTS - THE PUPIL PROFILES PROJECT

PATRICIA M BROADFOOT

The initiation of the 'Pupil Profiles' project at SCRE in 1973 was significant both in itself and as a notable departure from the more usual kind of Council project. It is not inappropriate that on the occasion of the 50th anniversary of the Research Council, we should recognise a new role for the Council, not only in conducting research, but in engaging in development and evaluation as well. In Scotland there is no equivalent body to the English Schools Council, which is responsible for developing new modes of assessment after the model pioneered by curriculum developers. Thus it was that the Research Council was able to respond to widespread concern over the inadequacies of existing certification procedures in undertaking a then novel combined research and development role, and equally novel dissemination procedures.

The spur to this development activity was the recognition by the Headteachers' Association of Scotland in 1972 of the need for a much more comprehensive form of 16+ certification which would be in keeping with an age of comprehensive secondary education. They recognised that despite the fact that the school-leaving age had been raised to 16 in 1972, schools were still working with certification procedures which had changed little since their initial design in the nineteenth century: procedures that were academic, formal and selective. Such certification, geared to the top thirty or so percent of the age group, was not then inappropriate since only about that proportion of the age group then remained in school at 16. Thus the certificate represented a realizable goal for the majority of pupils still in school. When 'secondary education for all' became a reality rather than an ideal with the 1944 education act, certification mechanisms became simultaneously inadequate. This was anticipated in England in the Norwood Report of 1943 and confirmed in Scotland by the Advisory Council Report of 1947. However, since that time, despite the agonizings of Beloe and Wadell in England - the initiators of the CSE and the new born GCSE respectively - and, in Scotland, the recent Dunning Committee Report on 16+ assessment, the fundamental tenets of secondary school assessment have changed but little, namely the ranking of one pupil against another on the basis of a single mark in a subject as often as not on the basis of a 'one-off' external exam. In particular, at present at least, these procedures are deliberately intended to exclude a sizeable proportion - perhaps 40% of the year group - from any chance to gain a worthwhile school-leaving qualification or formal recognition of any achievement they may have had during the 11 or so years they are obliged to be in school. Given the central orientation of schools to academic achievement and formal qualifications, it is not surprising that 'less academic' pupils who realise quite early on that they are unlikely to be successful, are rarely motivated to try hard to achieve goals which, by deliberate intention, most of them will be unable to attain.

Time does not permit me to go into the complex issues involved in this debate in any detail, nor to explain the strange anomaly which leaves the United Kingdom one of the very few countries in the world - even in comparison to countries in many ways more traditional in their education systems such as France and Germany - still agonizing over the necessity for formal external examinations at 16+. It is sufficient merely to testify that it was a deep concern over the deleterious

effects such inefficient and unjust certification procedures were having on so many Scottish pupils, together with the clear international evidence that alternatives were practicable without any loss in standards, that provided the initial impetus for the Pupil Profiles research project.

Into the aegis of their Working Party, the Headteachers drew representatives from many areas of the educational endeavour - tertiary education, colleges of education, employers, local authorities, and the Inspectorate who, together with the Scottish Council for Research in Education agreed to search for some alternative procedure. The lengthy deliberations and acrimonious debate which have characterised the prestigious government committees set up in recent years in both England and Scotland to consider the reform of 16+ certification, are testimony both to widespread dissatisfaction with existing procedures and that any new system developed is likely to be at best a compromise between conflicting priorities. In the case of the Headteachers' Working Party, these priorities were agreed to be the development of a procedure which would: enhance pupils' self-knowledge; provide users with relevant information; orientate teachers towards a diagnostic and guidance approach to assessment, and support the school in a programme of genuinely comprehensive (in the fullest meaning of the word) education.

Translated into practice this meant ' a recording and reporting procedure which would be equally applicable to all pupils; which would gather teachers' knowledge of pupils' many different skills, characteristics and achievements across the whole range of the curriculum, both formal and informal; which would, with the minimum of clerical demands, provide a basis for continuing in-school guidance, culminating in a relevant and useful school-leaving report for all pupils'. The record would include a variety of abilities and qualities that are not normally formally recorded, so that as well as necessary information on academic achievement and basic skills, credit would be given for example, for non-cognitive qualities, eg, perseverance and creativity, for helping other people through social service, for qualities of leadership shown in outdoor pursuits, for contributions to extra-curricular activities such as the school play or sport, or for just being a pleasant and helpful group member. Thus it was hoped neither activities nor pupils would be categorised into 'certificate' and 'non-certificate' and by implication, 'important' and 'not important', since it was felt that all areas of school life can contribute to personal development and thus all types of achievement are worthy of note. Such a system, which recorded idiosyncratic achievements, would preclude a ready comparison between pupils and thus help to overcome the feelings of failure so inevitable when only one kind of achievement is acknowledged. Quite simply it was felt that if all youngsters are required to attend school, the school must by implication have something worthwhile to offer them and if this is so, whatever it is, it is worthy of recognition.

It was recognised too, that the provision of an overall mark or grade in an activity is not helpful in diagnosing a pupil's strengths and weaknesses in order to help him make progress and that a 'profile' assessment - the recording of a pupil's grades in respect of his performance over a range of items - would be much more useful both as a basis for in-school guidance for teachers, parents and pupils, and for vocational guidance in giving both pupils and employers more information to help them make the right choices. Thus the aim was to design an assessment system which would allow teachers to record their detailed knowledge of pupils' progress obtained in a variety of different ways - whether it be class work, tests or informal personal contact - and yet which would not put too heavy a clerical burden on the teacher in terms of form filling. These aims of the Working Party were in many ways contradictory. The need for detail,

for example, as opposed to the need to avoid over-burdening teachers; the difficulty of being confident of reliability and fairness in what were inevitably often very subjective assessments; the difficulty of achieving comparability of standards between subjects and teachers in comments and grades - are just a few of the more obvious problems.

However by dint of trial and revision of early prototypes over a period of three years in a variety of Scottish comprehensive schools, and with the help of extensive consultation with a great variety of interested parties, a recording and reporting system was developed which was felt by the Working Party to come as near as possible to meeting its original aims in a practicable way. A detailed account of this work is available in the full report on the project Pupils in Profile (Hodder & Stoughton for SCRE 1977). The report also describes in detail how the SCRE Profile Assessment System works in practice - which I can only summarise briefly here. Of the three stages in the assessment - collection, collation and reporting - the first requires the teacher to record her knowledge of three different aspects of pupil learning: basic skills, subject-specific skills and work-related characteristics. It is recognised that of the basic skills - listening, speaking, reading and writing, visual understanding and expression, numerical ability, physical co-ordination and manual dexterity - each teacher will be unlikely to have information on all skills for all pupils but will be able rather, for some skills at least and for some pupils at least, to contribute to the overall profile built up by the combined knowledge of various teachers. The several levels of skill are represented by a four-point scale, the criteria for which having been developed by interdisciplinary panels of teachers. The second part of the profile allows teachers individually or in departments to identify the important components of achievement in a particular activity and thus provides a valuable key to the diagnosis of individual pupil strengths and weaknesses. The third and briefest part of the profile allows for assessment of those work-related behaviours which, as a result of the research, emerged with the highest predictive validity, namely perseverance and enterprise. In addition, there is space on the profile for teachers to record idiosyncratic information and comments about particular pupils.

The second stage of the procedure is the collation - either mechanically or manually - of the entries for each pupil to make up an individual profile. These profiles, containing as they do a wealth of diagnostic information on the pupil's learning in all areas of school life, can then be used in school for guidance, reporting, parents' evenings, references and crucially, as the basis for the third stage, a school-leaving report, which is the culmination of a continuing process of assessment and communication throughout the time a pupil is in school.

In designing the Report, the Working Party sought to avoid the pitfalls which have bedevilled the institution of school-based reporting so often in the past by paying great attention to the potential comparability of the report. Thus, the composite grading awarded for each basic skill is expressed in terms of specific behaviours which are self moderating. The grade for each subject and activity, expressed for the purposes of reporting in a single rating, is amenable to the Mode III style moderation techniques already developed. By contrast the back page of the report allows the recording of all kinds of idiosyncratic achievements in written form.

Thus the profile - particularly if adopted in a wide geographical area - can provide for existing certification functions and provide a

positive statement for all pupils if they will it. Equally, it can provide the kind of information that employers of young school-leavers in particular say they want - information on basic skills and work-related qualities.

Conclusion

The Pupil Profiles project was formally complete with the preparation of commercially available materials and guides to enable schools that wished to adopt the procedure, and the simultaneous publication of the detailed evaluation of the project in the book Pupils in Profile. But for any research and development project, the end must be likewise the beginning of new growth arising out of its impact on existing practice.

Three types of impact in particular might be expected from this project. First, direct take-up of the procedure by schools and its incorporation as practice. Second, the permeation of the ideas and data produced in the research into wider debates about assessment, particularly with regard to 16+ certification and profiling. Third and most diffuse, the demonstration of the scope of such 'action' research and the pros and cons of the strategies employed in both the research and its dissemination. It is impossible to quantify such impact. Take-up in terms of specific practice is at present spasmodic and unreflective of the considerable interest shown in the project throughout the educational community. Certainly no national recommendation for the procedure in toto has yet been forthcoming, but the incorporation of many of the central ideas underpinning the project into the Dunning Committee Report in Scotland testifies to impact at the second level identified. Evaluation of the third level of impact is yet more complex and beyond the scope of today's discussion. To evaluate the various outcomes of the project may indeed merit another research project - such is the hydra-like nature of educational research.

Researchers must often be satisfied and indeed aim to leave in their wake as many more questions as they have answered. The 'Pupil Profiles' project has not only illuminated some of the most crucial dilemmas in certification reform, it has raised many more general issues about the relationship between research and educational practice. As such, although it may well have fallen short at every stage of the process of identification, collaboration, evaluation and dissemination inherent in research and development, nevertheless its value as a piece of research probably inheres as much in its illumination of a potentially fruitful research strategy for the next fifty years of the Council's existence, as it does in its more direct contribution to our thinking about assessment.

TESTING AS TEACHING

HARRY D BLACK

The School-based Assessment Programme of the Scottish Council for Research in Education comprises, at the present time, the Diagnostic Assessment Project (Phase I 1976-78, Phase II 1978-81, funded by the Scottish Education Department) and the School-Based Assessment in the Affective Domain Project (1978-79 funded by the Social Science Research Council).

The object of this paper is to outline some of the issues and concerns of the Programme based on work done in Phase I of the Diagnostic Assessment Project which was a feasibility study with three main aims. These were;

(1) An evaluation of the potential for a diagnostic approach to assessment in secondary schools,

(2) To carry out small-scale pilot studies in the creation of instruments and tests for diagnosis and,

(3) An evaluation of the potential for a collaborative approach to research in schools.

The research base of the Project was a series of case studies in six schools. In each school only one department was involved with two in each of the three subjects;modern languages, technical education and geography. There are of course advantages and disadvantages in both the case study base and collaborative research which cannot adequately be described in a paper of this length.[1] However, the intensive nature of the work and the collaborative approach which saw the teacher and the researcher as equal professionals contributing to the Project within their special competencies meant that the researchers became very aware of the grass roots perceptions of the teachers with whom they were working.

The Potential for Diagnostic Assessment

From the evaluative standpoint there were two basic issues. The first was what part assessment should play in teaching and the second was whether the teachers were taking advantage of its potential.

A useful starting point is two comments from work in the United States.

> "Testing and teaching are inseparable aspects and not two different enterprises as one might be led to believe by current practices in education. Frequent information about student performance is used as a basis on which the teacher decides on the next instructional step: and equally important it also serves as a feedback to the student. It is also invaluable data for the design and redesign of teaching materials".[2] (Glaser, 1971)

> "In the United States the typical classroom teacher has little competence in tests and measurements and is reluctant to invest heavily in more..... Specifically I am critical of the inability of the American teacher to design and construct relevant measures of students' attainment, to capitalise on the diagnostic utility of measurement for instructional purposes and to develop fair and interpretable summaries of students' attainment".[3] (Rosner, 1968)

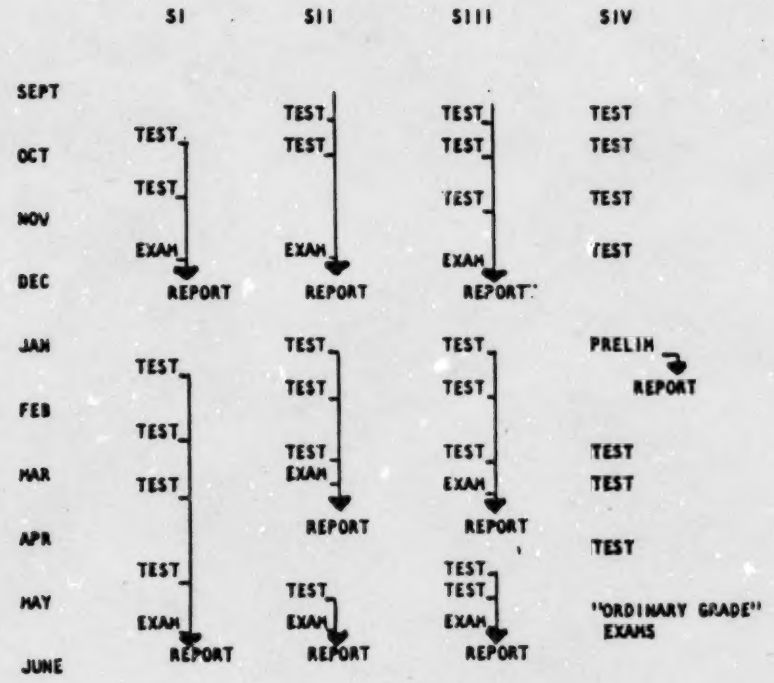
Taken together these statements constitute a disturbing argument. The suggestions are first that assessment has an important part to play in teaching and second that teachers (at least in the United States) are not very good at

taking advantage of its potential.

How true is this of the Scottish schools in which we worked? Figure 1 is a model of the typical assessment pattern operating in the departments prior to the project. Although a generalisation, the pattern is typical of that found in most schools in our experience.

Figure 1

A MODEL TO ILLUSTRATE THE TYPICAL ASSESSMENT PATTERN OPERATING IN THE CASE-STUDY DEPARTMENTS PRIOR TO THE PROJECT.



TEST	Continuous Assessment Test
EXAM	End of Term Examination
REPORT	Formal Report to Parents
PRELIM	"O" Grade Pre-Test

The first obvious conclusion which can be drawn is that there is certainly no lack of assessment. But to what extent can we say that assessment is contributing to teaching? Taking each component in turn, the 'O' Grades are basically a competition for limited places in the next phase of education or employment. They are designed to satisfy the role given to education by society as a sorting house or hurdle, and the feedback is both at too general a level and too late to be of any value in learning.

The feedback from "prelims" and "end of term exams" is of the same order. It is norm-referenced and often "standardised" for statistical nicety, which means that the scores relate not to the attainment of whatever aims or objectives are intended in the examination but to the scores of other pupils and to the range of marks in other subjects which may bear little relationship to the particular attainments of any given subject. True the pupils have some indication of general progress in "History" or "English" and teaching may benefit from a "revision" period when the scripts are returned, but there must be considerable doubt as to whether this is an adequate remedy for a term's-worth of learning problems.

Perhaps most disappointing is what normally happens in continuous assessment, for of all the forms of formal assessment in the model, it is most closely related to the teaching sequence. Yet, in most instances where we saw continuous assessment taking place, it was carried out at the end of a unit of work, often when the class had started a new unit and so too late for adequate remedial action. Furthermore, the feedback was in the form of a general attainment grade giving no real information about specific success or learning problems. Continuous assessment had come to be seen as a staccato form of terminal assessment.

In short then, the main focus of effort and organisation in the case study schools was on assessment as a means of making a statement on general attainment. It was a judgement or a comment on an individual which may serve the needs of society but is of little help as an aid to pupil learning. But fortunately this was not the whole picture. Although it varied considerably amongst pupils and subjects, all the teachers practised some form of informal assessment. In contrast with the formal assessment system this teacher-based assessment - the occasional dialogue which took place with classes, groups of pupils and individuals, the remarks scribbled on pupils' essays and the help given with exercises and worksheets-had an obvious place in teaching and learning.

Yet the teachers themselves were aware of inadequacies. Often little use was made of the information available. Seldom had a system been developed to pinpoint the particular learning difficulties of individual pupils, although the information could easily have been gleaned from an appropriate systematic assessment. Equally at the class level the possibility of using information from assessment in previous years, or in comparison with other classes or groups of students, to make systematic changes in either curricula or teaching methods was seldom exploited. Even where errors were being diagnosed, they were often picked up in a fairly random manner. The tests were thought of as investigating general attainment and items were seldom grouped such as to give information on specific objectives, with the exception perhaps of the grammatical elements of modern languages. Furthermore, there was no efficient system available to record diagnosed errors, which made it difficult for the teacher to pinpoint consistent strengths and weaknesses even where the information was available.

Perhaps even more disturbing was that the teachers felt both that their informal assessment had to take second place to the formal reporting system, and that as far as teacher-based assessment as an aid to pupil learning was concerned, little or no help was available to teachers from outside agencies of any kind.

Nevertheless, despite the inadequacies of the approach as practised, this informal assessment carried out by the teachers was the obvious starting point for the development of diagnostic assessment. The idea was not to create a new form of assessment but to develop and systematise existing good teaching practice.

Thus the researchers entered into the Project with a fairly broad interpretation of diagnostic assessment, and it was only after considerable dialogue between teacher and researcher that it was felt appropriate to become more specific. Three basic diagnostic questions were being asked by the teachers which produced a generic definition of diagnostic assessment for the Project (Figure 2). These three categories or modes of diagnostic assessment served to direct development of instruments and tests appropriate to the particular needs of the range of case studies carried out, and at the same time made clear the constructs which might be taken from the feedback.

Figure 2

THE MODES OF DIAGNOSTIC ASSESSMENT AS USED IN THE PROJECT

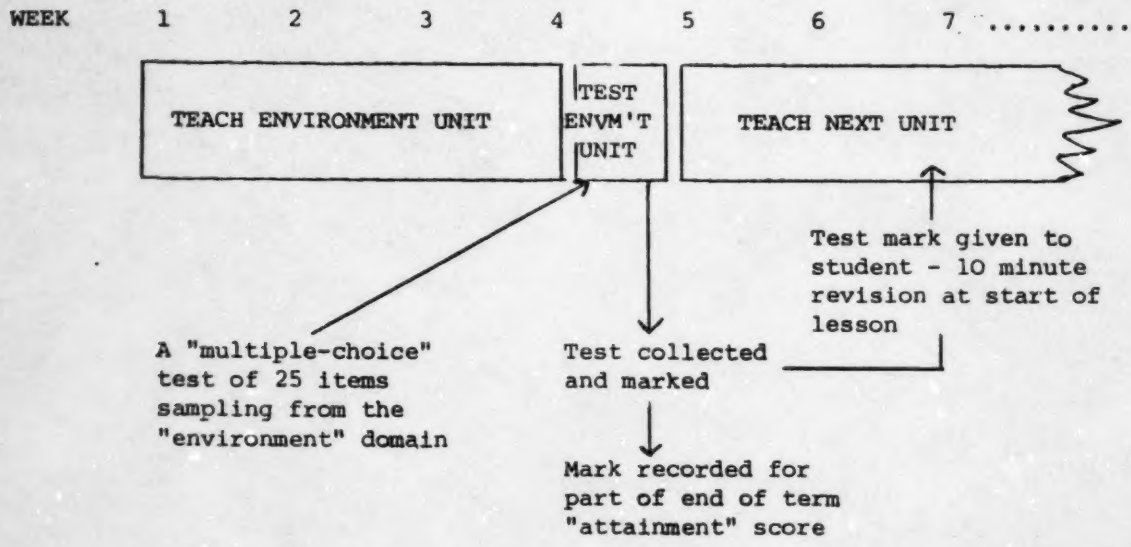
Mode	Focus of Assessment	Area of Concern	
1	The Class	The success of the class in attaining the intended objective	Each of these can contribute to curriculum evaluation, eg are the objectives suitable, is the teaching strategy successful, etc?
2	The Individual Pupil	Which pupils have not attained the objective?	
3	The Individual Pupil	What is/are the reasons(s) for the pupil not attaining the objective	

A Case Study

The best way to illustrate our approach at a practical level is to take an example. The continuous assessment system of one of the case study Geography departments at the outset is shown in Figure 3. There were two major criticisms which could be made of this approach from a diagnostic perspective. First, the test result, combining as it did the score for all questions and items irrespective of the element of pupil learning they were intended to assess, was at too general a level. Second, the system allowed little time for remedial action, the test taking place at the completion of the learning sequence rather than as part of it. Our first task therefore was to deal with the inadequacies.

Figure 3

THE CONTINUOUS ASSESSMENT SYSTEM USED IN THE DEPARTMENT PRIOR TO THE PROJECT



Planning Feedback

"Environment", the topic being taught in the study unit, was too wide a domain to be sampled on its own. Yet the opposite extreme of testing for every objective in the unit would have dominated the teaching process to an intolerable degree.

Our solution was to use a core/extension model[4] which was particularly appropriate to the mixed ability situation in which we were working. The core concepts (shown in Figure 4) were considered by the teacher to be of such importance that all pupils should attain them. Many other concepts, skills and areas of knowledge would be assimilated but the assessment procedure would be directed not at general attainment but at the attainment of the specific core concepts of the unit.

Figure 4

THE INTENDED LEARNING OUTCOMES OF THE UNIT.

AIM OF THE UNIT

A better understanding of the environment.

CORE CONCEPTS

1 & 2	To assimilate the concepts "natural environment" and "man-affected environment" and to be able to differentiate between these.
3, 4 & 5	To be able to recognise pollution, dereliction and vandalism.
6	To understand the term "conservation".

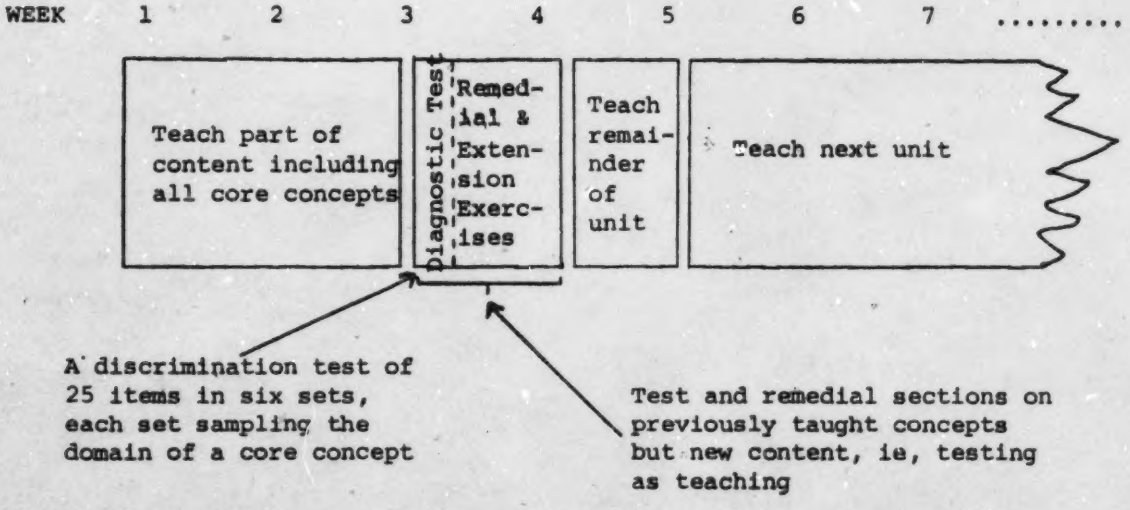
OTHER OBJECTIVES

Many, but not considered as crucial as the core concepts in this particular unit.

Having specified the objectives to be assessed, the system had to be adapted to accommodate diagnostic feedback. The programmed learning approach was not felt to be appropriate to the Scottish teaching tradition; but could the advantages of an individualised approach to learning be assimilated into the ordinary classroom?

Figure 5

THE DIAGNOSTIC ASSESSMENT SYSTEM USED IN TEACHING THE "ENVIRONMENT" UNIT


WEEK 1 2 3 4 5 6 7 .....
Teach part of content including all core concepts
Diagnostic Test
Remedial & Extension Exercises
Teach remainder of unit
Teach next unit
A discrimination test of 25 items in six sets, each set sampling the domain of a core concept
Test and remedial sections on previously taught concepts but new content, ie, testing as teaching

Our experimental approach is shown in Figure 5 and this proved to have a number of advantages over the original system illustrated in Figure 3. In the first teaching section, which lasted for about two weeks, any teaching approach on the didactic-heuristic spectrum could be used. During this initial teaching period, careful planning meant that all the core concepts could be taught and these could be tested in the diagnostic/remedial section using new content. In fact the concepts were taught using examples from the industrial and rural environment and then tested through a completely new set of examples taken from the water environment. Thus testing became part of teaching and individualisation was achieved through the teacher using the results of the test in the middle of the teaching sequence to create remedial and extension exercises as appropriate.

The importance of carefully planning the intended learning outcomes to be diagnosed and the system in which the assessment is to take place should not be underemphasised. It underlines the fact that diagnostic assessment is an approach to assessment and not a type of test - a point stressed in all the case studies in the Project.

Tests for Diagnosis

The next problem is what kind of test to use. In testing for the attainment of specific concepts we would not be comparing pupil with pupil within each class and so it would not be a norm-referenced test.

Yet at the same time, in testing for the attainment of fairly abstract concepts such as "dereliction" and "pollution", we were not able to set behavioural criterion which would be measurable on paper in the same way as would be for example, the ability to solve arithmetic problems. To give an honest construct to both teacher and student as to what could be gleaned from the test, we had to make it obvious that we were sampling with a domain of understanding. Therefore, in this example and in most of the case studies carried out in the project, we prefer to think of our tests not as being criterion-referenced but rather as domain-referenced.

But how are these tests to be constructed? Throughout the Project we have concentrated our item construction techniques on the pre-test analysis of content validity rather than relying on face validity and item analysis. It should be stressed that post-test analysis is an important consideration and one on which we have expended considerable thought but the difficulties of analysing for content validity in the criterion- or domain-referenced context are legion and well explained in the literature.[5] In contrast, relatively little work has been done on the application of existing theory (either learning, psychological or epistemological) to the construction of items.

In this particular test, the items were based on a model of concept definition and attainment proposed by Markle and Tiemann.[6] In brief summary, concepts can be thought of as having a number of defining attributes, and an instance is only an example of the concept if it has these attributes. For example, the concept "river" might be defined as having the following attributes:

(a) it comprises a body of water
(b) there is an associated linear channel
(c) the channel proceeds to progressively lower levels
(d) it is a natural phenomenon.

Thus below, we have a positive instance having all four attributes while the negative instance is a non-example because while it has the first three attributes, it is not a natural phenomenon and is therefore a canal and not a river.

This theory was used by the teachers to arrive at an agreed definition of the six core concepts at a level they felt appropriate to an S2 age group in their own school. Thus "conservation" is defined as having three defining attributes; ie, it is:

(a) an option open to man regarding the environment
(b) construed as a positive act
(c) concerned with the preservation of a natural resource.

Markle and Tiemann's[7] suggestion as to how concept attainment should be tested neatly fits this system. They say that,

> "The analyst is required to select as test items a completely new set of examples and non-examples, the examples representing the same kind of broad sampling of the total range of the concepts and the non-examples representing the same fine discriminations taught in the teaching sequence."

Now in this study, the concepts had been taught using "content" examples from the industrial and "land" environment and were now to be tested using a completely new set of examples and non-examples from the "water" environment.

The next task for the teachers therefore was to set out a series of instances of each concept and another series of non-instances, each lacking only one defining attribute, as according to the underpinning theory, the most difficult discriminations will be between examples and non-examples each lacking only one of the defining attributes. In many cases, however, the removal of one defining attribute will result in a vacant cell in the matrix especially if one is confined by content to a limited choice of examples but this is probably not of great importance as long as an adequate number of non-examples are thought out from the completed cells.

In translating this theoretical structure for items into practice, a discrimination test of 26 items was constructed. Each item comprised a short paragraph from a simulated newspaper and the student was asked to indicate which of three alternatives was suggested to him by reading it. The answer sheet is illustrated in Figure 6.

Figure 6

Environment Unit
SCRE/

Name: _____ _____ Class: _____

Teacher's Name: _____ _____

Number correct for each concept

CONSERVATION		MAN AFFECTED ENVIRONMENT	
VANDALISM		NATURAL ENVIRONMENT	
DERELICTION		POLLUTION	

DO NOT WRITE IN THIS BOX.

Look carefully at the Newsheets and Diagrams. You will see that each story has a number. This number is also on the Diagram. You will see below a list of three descriptions for each story. Decide which is the most suitable description of the story and put a cross in the box beside it. Do not write on the Newsheets and Diagrams.

BLACKOLE BUGLE

1. Cyanide in River	Pollution	
	Vandalism	
	Neither of these	
2. Fishing Farce	Dereliction	
	Conservation	
	Pollution	
3. Vertlee Grove to Stay	Natural Environment	
	Dereliction	
	Vandalism	
4. Ospreys' Paradise	Conservation	
	Natural Environment	
	Neither of these	
5. Canal May Reopen	Natural Environment	
	Conservation	
	Dereliction	
6. End of Water Mill	Dereliction	
	Conservation	
	Vandalism	
7. Toe-up Catch	Pollution	
	Vandalism	
	Neither of these	
8. Abundant Mackerel	Conservation	
	Man affected environment	
	Neither of these	
9. Ladder Pulls Crowds	Natural Environment	
	Conservation	
	Neither of these	
10. Otters Protected	Dereliction	
	Vandalism	
	Conservation	
11. Tourist Attraction	Conservation	
	Natural Environment	
	Neither of these	
12. Dumping Continues	Pollution	
	Vandalism	
	Natural Environment	
13. Destruction	Dereliction	
	Vandalism	
	Conservation	

SEASIDE NEWS

1. New Nature Reserve	Vandalism	
	Conservation	
	Neither of these	
2. Annual Seal Cull	Conservation	
	Dereliction	
	Neither of these	
3. Black Cliff Havoc	Dereliction	
	Vandalism	
	Pollution	
4. Observation Platform	Man Affected Environment	
	Conservation	
	Neither of these	
5. No Entry Sensation	Dereliction	
	Natural Environment	
	Pollution	
6. Harbour to Come Down	Conservation	
	Dereliction	
	Neither of these	
7. Fish Protected	Vandalism	
	Pollution	
	Conservation	
8. Oil Slick Near Coast	Pollution	
	Natural Environment	
	Dereliction	
9. Beach Health Risk	Conservation	
	Pollution	
	Dereliction	
10. Scientists in Bay	Natural Environment	
	Pollution	
	Neither of these	
11. Land Reclamation	Man Affected Environment	
	Pollution	
	Conservation	
12. Rare Bird Spotted	Vandalism	
	Natural Environment	
	Conservation	
13. Oyster Beds Attacked	Natural Environment	
	Dereliction	
	Neither of these	

Figure 7

ITEMS FROM THE TEST REPRESENTING BOTH POSITIVE AND NEGATIVE INSTANCES OF CONSERVATION.

LADDER DRAWS CROWDS

The salmon leap on the side of Wallis Dam is proving to be a big attraction. The ladder, built to allow the annual migration of salmon up the Blackhole River to continue had its one millionth visitor today.

A POSITIVE INSTANCE AS IT HAS ATTRIBUTES "a", "b" AND "c".

TOURIST ATTRACTION

The new outdoor centre on Blackhole Reservoir is expected to give a boost to the tourist industry of the region. Anglers especially should be flocking in because of the policy to stock the reservoir with several varieties of fish. Areas will be stocked with different amounts of fish to produce a range of challenges for anglers.

A NEGATIVE INSTANCE AS IT HAS ATTRIBUTES "a" AND "b" BUT LACKS "c". ie. IT IS NOT CONCERNED WITH THE PRESERVATION OF A NATURAL RESOURCE

Figure 7 illustrates two items to test "conservation". The first is an example as it has each of the three attributes of the concept while the second is a non-example as it is not concerned with the preservation of a natural resource but instead is a tourist attraction in a reservoir.

Thus the diagnostic test for the unit comprised six sets of items. Each set sampled the domain of understanding for one of the core concepts. The test then had six sub-scores and the answer sheet was designed with a marking template which would either allow the pupils to score the test on their own or allow the teacher to mark it at about the rate of one sheet per minute. The teachers and pupils had immediate and valuable feedback on the concepts which each pupil had failed to attain and were able to instigate immediate reinforcement treatment using individualised worksheets created in advance.

Figure 8

THE SECTION SCORES OF A CLASS ON THE "ENVIRONMENT" TEST.

	SECTION	1	2	3	4	5	6	TOTAL
Pu -	A	6	2	3	3	(2)+	5	21
	B	5	2	3	4	(1)	4	19
	C	(4)+	(1)+	(2)+	3	3	4	17
	D	(3)	(1)+	3	3	(1)+	5	16.
	E	5	2	3	3	(2)+	4	19
	F	5	2	4	(2)	(2)+	4	19
	G	(4)+	2	3	(2)	(2)+	5	18
	H	6	2	4	3	(2)+	5	22
	I	(4)	3	3	3	(2)	5	20
	K	5	2	3	(2)+	3	5	20
	K	5	2	3	(2)+	3	5	20
	L	(4)+	3	3	(1)+	3	5	19
	M	5	(1)+	4	4	4	5	23
	N	5	2	4	3	(2)+	5	21
	O	(4)+	2	4	3	4	5	22
	P	(3)	2	4	(2)	(2)+	(3)+	16
	Q	5	2	4	3	(2)+	5	21
	R	6	2	4	3+	(2)	5	22
	S	5	2	3	(1)	3	4	18
	T	5	2	3	3	(2)	4	19
	U	(4)	3	3	(2)	3	4	19
	V	(2)	3	(2)+	(2)	3	4	16
	W	(4)	2	3	3	(1)+	4	17
	X	(0)	2	(1)	(2)	(2)+	(3)+	10
	Y	(3)	2	(2)+	(1)	(1)+	(2)	11
	Z	(4)	2	(1)+	(1)	(2)+	4	14
NUMBER OF ITEMS IN SECTION		6	3	4	4	4	5	
PASS SCORE (ARBITRARY CRITERION)		5	2	3	3	3	4	
CONCEPTS TESTS IN SECTION		CONSERVATION	VANDALISM	DERELICTION	MAN-AFFECTED ENVIRONMENT	NATURAL ENVIRONMENT	POLLUTION	

(0) STUDENTS FAILING TO ATTAIN PASS SCORE.

+ FAIL MODIFIED TO PASS ON POST-REMEDIAL TEST.

At a later stage the scores for each class were analysed outside the school and the result for one class is shown on Figure 8. The results for each class were similar and a number of interesting points emerge. First it is worth noting that no pupil succeeded in attaining all the concepts prior to the reinforcement exercise, although 11 out of the 26 attained them all on a subsequent post-test. Thus even the "most able" pupil had diagnosed learning difficulties which benefited from remedial treatment. Second, the "least able" in terms of the total mark on the test each succeeded in attaining at least one concept and so could be given positive feedback. Equally they were able to concentrate on their weaknesses for reinforcement and it is worth noting for example that pupil "x" who had the lowest total score and attained only one concept, was able to attain a pass score on three of the concepts in the post-test. In short, detailed analysis of scores in this way strongly suggests that the teachers had to modify the constructs which they would have taken from the general attainment grade.

In this case study only one of a number of pilot studies in the creation of diagnostic assessment instruments and tests has been described. Other small-scale studies include an attempt to create objective-oriented essay marking schemes, the diagnostic assessment of affective objectives, the diagnostic analysis of traditional teacher-made tests, the mode III diagnosis of errors based on teachers' hypothesised errors etc. These are reported elsewhere and the interested reader is invited to seek further information from the Council.[8]

In general terms however, the burden of our conclusions must be that while diagnostic assessment is not new, most teachers would agree that much work needs to be done in rationalising and systematising the procedures for testing as teaching.

Without exception the teachers working with us consider diagnostic assessment useful. Almost without exception they will not be able to make adequate use of its potential unless tests, instruments and recording systems are developed on some basis other than by the individual teacher. To do this we need a radical change in the emphasis in research, development and the general perception of assessment. We need to move away from the idea that assessment is a judgement, towards a recognition that it should contribute substantially to pupil learning. Only then will testing truly be part of teaching.

Footnotes

1. For a short account of the methodology adopted by the project see Black, H D, Collaborative Research - the Diagnostic Assessment Project in SCRE, 1978 50th Anniversary, SCRE, Edinburgh. And for a wider discussion of the problems and potential of collaborative research see Black, H D & DeLuca, C, Collaborative Research from Both Sides of the Same Fence, paper given at the Autumn Conference of SERA, 1978, St Andrews.

2. Glaser, R, adapting the elementary school curriculum to individual performance in Hooper, R (Editor) 1971, The Curriculum: Content, Design, and Development, Edinburgh, Oliver and Boyd.

3. Rosener, B, Teachers' perceptions of their tests and measurement needs in Ingenkamp, K (Editor) 1968, Developments in Educational Testing, London, ULP.

4. The Geography work of the project was done in cooperation with the "Mixed-Ability Teaching in Geography" Project of the Scottish Curriculum Development Service. A useful account of the core/extension model used in this case-study is to be found in the occasional paper reporting on that project and available from the SCDS.

5. There is much literature on the difficulties of criterion-referenced measurement, but a useful introduction and summary is to be found in Sumner, R & Robertson, T S, 1977, Criterion-referenced measurement and criterion-referenced tests: some published work reviewed, Slough, NFER.

6. Markle, S M & Tiemann, T W, "Behavioural" analysis of "cognitive" content in Thornburg, H (Editor) 1973, School Learning and Instruction: Readings Monterey, California, Brooks/Cole Publishing Company.

7. Markle, S M & Tiemann, T W, op cit.

8. A number of publications are at present in preparation reporting the project. Further details can be had from the writer at 16 Moray Place, Edinburgh.

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DO PEOPLE GET WHAT THEY WANT OR WANT WHAT THEY GET IN TERMS OF PRE-SCHOOL PROVISION?

JENNY HAYSTEAD

This is a very complex question which our study of the demand for, uptake and supply of pre-school education and care facilities has attempted to answer in various ways. For example, we have asked parents about what they want for children of different ages in relation to what is available in their area, and the characteristics of the facilities with which they are familiar.

What people want is influenced by what they know about. This in turn depends for most people, in spite of the mass-media, on what is available in the area in which they live. For example, we found whilst interviewing mothers living on the outskirts of Edinburgh, in the city centre and some rural areas in the Lothian region, that even though all the main types of facilities exist in the region, fewer people in the villages knew the basic facts about nursery schools and classes than did people living in the city. Main types include nursery schools and classes, day nurseries, playgroups, childminders and mother and toddler groups. Further, because there were fewer playgroups in the area on the outskirts of the city, mothers living in the rural areas or in the city centre area were more likely to mention playgroups and also knew more about them than did mothers living on the city outskirts.

We found that most mothers found it very difficult to talk about what kind of facilities they need, or would like, for their pre-school children beyond a few improvements to the existing types of facilities. The only exceptions were mothers who had lived in another country. In other words, what they desire is limited by what is currently available.

We designed a special study to examine the influence of knowledge on the demand for pre-school facilities. It is this study that I should like to describe to you.

The main reason for carrying out this study is to see if increasing the level of knowledge about the pre-school facilities in a particular area influences the pattern of demand. The belief is often expressed that advertising pre-school facilities will increase demand. It was this belief that we wanted to examine. However, in order to do so, we had to act as though it were fact. That is, we had to study an area in which there is as much provision as is required. The reason for this was that it would have been unethical for us to advertise provision in an area where there were no available places and such a course of action might have created problems for the local authority.

We defined an area in terms of primary school catchment areas. It was a distinct geographical area. The different social class groups were reasonably represented. It contained examples of all the main types of pre-school facilities with which we were concerned. We wanted an area in which there had not really been any important recent debates about pre-school provision so that the effect of the information we provided

would be maximised. Whilst this was true of Leith to a certain extent, we did find, as the study progressed, that because there were plenty of pre-school places the facilities had tended to make themselves known even if they did not advertise on a wide scale.

We wanted to find out two different things. First, we wanted to know if giving people information about facilities for pre-school children influenced the pattern of demand in terms of action. That is, would we make more people want to use facilities just by telling them that they existed, or would we make a particular type of facility become more popular amongst a particular section of the population, such as mothers with children of a certain age? Secondly, we wanted to compare the effectiveness of different ways of transmitting this information.

We therefore needed a way of comparing applications to pre-school facilities before and after our action, or information-giving, and a controlled programme of attempts to increase the level of knowledge of the residents of this area.

In order to look at the demand for pre-school places in Leith, we had to have the co-operation of all the local authorities and voluntary provision in the Leith area. We designed forms which are to be completed each time that a parent or guardian enquires about a place in a nursery school or class, a playgroup, a day nursery, or with a childminder. Similarly, we have a form which is completed, by the person responsible for allocating places, each time a child leaves.

This monitoring started 1st August, 1977. Leith was flooded with information about pre-school facilities in August and September, 1978. The monitoring is continuing until 1st August, 1979 so that we can look at the influences of our actions over the whole year cycle. Even so, the influence of our intervention will tend to be underestimated for two main reasons. We have given information to many mothers of very young children which may have had an influence on their plans for more than a year ahead. Secondly, we have probably raised the level of knowledge about facilities in the community in general which may influence the pattern of demand and uptake for years to come.

As the monitoring is still in progress, a comparison of the pattern of demand before and after our intervention cannot be made here. However, some observations on the first year may be of interest.

The forms which are returned from playgroups are more likely to have been completed by the mother than those returned from nursery units or day nurseries. This seems to be partly a reflection of the playgroup movement ideology but also of the practical constraints of the playgroup situation. Day nurseries and some nursery units routinely collect most of the information we requested anyway.

It tends to be only 'serious' enquiries which are recorded. For example, the day nurseries will point out the criteria of eligibility to a mother and if she is immediately not appropriate, her application may go no further than a telephone call. As it is therefore not feasible to complete a form for them, we asked for the numbers of such cases to be recorded.

Provided that the child was old enough for the facility in question, last year most children were given a place straight away. This may not have meant the next day because some places have a staggered entry system, but it meant as soon as practicable.

Most of the drop-outs were children starting primary school or moving to another district. There was not a great deal of movement between types of facilities. Numerically, the largest category was children moving from playgroup to nursery school but most of these cases came from one playgroup.

We had four different phases in our programme of information presentation. We wanted to compare the effect of giving people information in a written form, in a spoken form and using a visual medium. We therefore delivered leaflets, arranged discussion sessions and showed a television programme about pre-school provision, in the following sequence so that we could try to separate the influence of each phase.

1. Information leaflets

Leaflets describing the characteristics of each of the major types of facilities in the area were delivered to the houses of pre-school children. The leaflets were made as eye-catching as possible and the information kept to a minimum. Each type of provision was dealt with as a separate section so that it could be read selectively. The list of actual places in the area was on a separate sheet, inserted in the folded leaflet. This meant that it could be updated if necessary. The addresses were taken from the Education Department's statistical survey of the previous year.

The objective was to see how many mothers saw the leaflets, how many read them and how many said that they had learned anything from them. As one of our main concerns in the whole study was to get information to as many people as possible, rather than delivering a few leaflets and returning several times, we spread our resources thinly. We delivered the leaflets to four of the primary school catchment areas and only returned once the following day to see if the mother was at home. Our sample total was 107 mothers.

Not everybody reads leaflets that are put through the door, particularly if they do not seem to be of immediate relevance to them. Hence, people already using some kind of pre-school facility tended not to be interested in our information leafets. Twelve of them (11%) had children who had, in fact, already gone to school. Six mothers (6%) did not see the leaflet at all. Another twelve (11%) saw the leaflets but did not read them. Of these, one was leaving the country in a few weeks' time, nine were already using some kind of provision, one had only a baby of three weeks old and another, a child two years old. Four of the mothers (4%) did not speak English: presumably they did not read the leaflets and, anyway, could not answer the questions.

Nineteen mothers (18%) said they did not gain any information at all from the leaflets. Sixteen of them were already using some kind of provision and the other three had definite plans to take their child somewhere after the summer holidays.

Table 1 shows the number of mothers who said they had gained information about one or more type of facility. They total forty-one (38%). In addition, thirteen (12%) mothers said that they had gained information from the list of facilities in the Leith area, such as their numbers and locations. Eleven (10%) mothers had gained information from both the general descriptions and the list of specific places.

Table 1: Number of mothers who said that they had gained information about the general characteristics of one or more type of facilities from the information leaflets

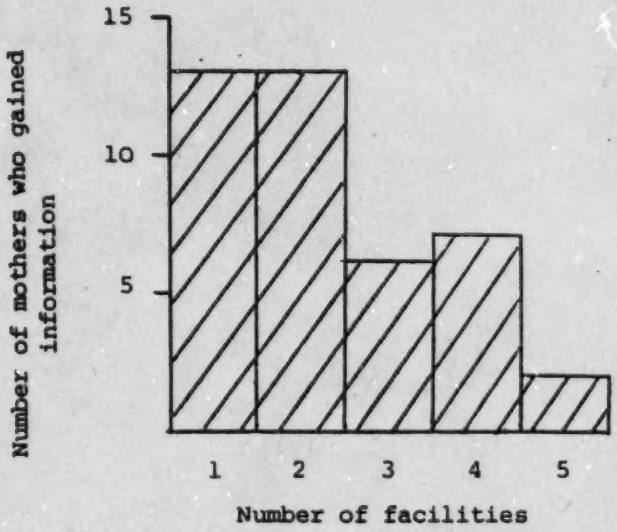

Table 2 shows that more mothers gained information about childminders, day nurseries and mother and toddler groups than about playgroups and nursery units.

Table 2: The number of mothers who said that they had gained information about each type of facility

Type of facility	Number of mothers	Percentage of mothers who gained information
Playgroup	9	22%
Nursery unit	10	24%
Day nursery	23	56%
Childminder	30	73%
Mother and toddler group	23	56%

Thirty-five of the mothers who had gained information from reading the leaflet, (33% of the total number of mothers contacted) said that they had not changed their plans for their pre-school child as a result of reading the information leaflet. Twenty-two of them were already using some kind of facility; another five had made arrangements to do so; one had her name down and the remaining seven had previously planned which facilities to use.

Six of the mothers who said that they had gained information also said that reading the leaflet had influenced their plans for their pre-school child (6% of the total number of mothers contacted). The changes were as follows. Two had decided that they might take their children to childminders. (They had not known about childminders previously). One mother thought that she might move her two and a half year old child from a playgroup to a nursery class. She now knew where such classes were. One mother said that she thought that she would change her plan to send her seventeen month old child to a playgroup when the child was old enough and send her to a nursery school instead. Another mother of a child nearly three years old said that she would send the child to a nursery class. She had not known that they existed. Finally, a mother said that she might take her nearly two year old child to a playgroup at two and a half rather than waiting until the child was three.

2. Coffee and discussion sessions

We arranged and advertised three coffee and discussion sessions. The first was in the afternoon, in the community room of a high rise block of flats and was publicised by means of posters in local shops. The second was arranged for a morning in the Community Centre in the middle of Leith and was publicised fairly widely by means of posters in shops and two paragraphs in the'Evening News'. The third was arranged for a more specific group of people, namely, the mothers who attended the nearby mother and toddler group. They were sent a letter telling them that every-one in their group was being invited. The meeting was held in the evening in a Community Centre. Representatives from the Social Work Department, the Education Department and the Scottish Pre-School Playgroups Association attended each meeting as our panel of experts.

The coffee and discussion sessions were in some senses a complete disaster but in other ways very rewarding. I should not like to repeat such an exercise purely because it is extremely difficult to expect one's invited speakers to be as philosophical about a tiny audience as the members of the research team are themselves. It showed unequivocally that people will not come to such a meeting when it is advertised by such an impersonal means as posters. There has to be some point of contact. Somebody has to personally invite the mothers to come or they have to know some other people who will be there. The one mother who did attend the meeting in the community room of the block of flats brought her mother and child with her. The only people to come to the meeting in the Newkirkgate Community Centre were the two playleaders from the playgroup held there. However, seven of the mother-and-toddler-group mothers came.

At the first meeting, our four experts discussed provision with the one mother and her mother. The mother completed a questionnaire for us which showed that she had gained information about playgroups, nursery units, day nurseries and childminders. She said that she had enjoyed the discussion and now was thinking of taking her child to a playgroup or a nursery unit when she was old enough. For the moment, she would like to go to a mother and toddler group and enquired about where the nearest one met.

At the second meeting, a discussion about the difficulties facing playgroups in the Leith area ensued. It was reported that there was a danger of playgroups becoming 'toddler' groups in an area where there is no shortage of nursery unit places. Mothers were tending to take their children to a playgroup only until the child was old enough to take up a nursery unit place. It was also stated that some mothers took their children to one place for the morning and to somewhere different for the afternoon. The discussion seemed to suggest that it would be desirable for all the people involved with pre-school provision in this area to get together and talk about co-operation rather than competition. As a result one of our experts organised a meeting under the umbrella of Committee for the Under Fives which exists in the Lothian Region. This meeting, to which we were invited, took place about a month later in the same room. It was fairly well attended and was seen as the first of a series of such meetings.

At the third coffee and discussion session, the experts outlined the characteristics of the pre-school provision in the area and, at the end, the mothers present completed questionnaires telling us the kind of information that they felt they had gained. It proved to be minimal. Although they all stated that they had enjoyed the discussion, only one mother had gained information about playgroups and two about nursery units. Four of the mothers present were wanting to take an Open University course in Child Development and one of them was the treasurer of the mother and toddler group. This suggests that the few mothers who did actually attend the discussion had perhaps a rather different interest in young children from the majority of people. There was a very lively discussion about the mother and toddler group. The mothers talked about why they went and what it meant to them.

3. Television sessions

A video-tape recording showing the main characteristics of day nurseries, nursery units, playgroups and the childminding service was made in Leith. It was hoped that this would increase interest as well as make it relevant to the local situation. We wanted to get the reaction to the recording of different groups of mothers, namely, those using different kinds of provision and non-users. Again, they were asked to complete a questionnaire about the things they had learned, if any, from the programme.

We arranged to show the programme in each of the facilities in the area generally just before the time the mothers usually collected their children. They were invited by means of a letter explaining the content of the programme. This gave us groups of mothers using each kind of facility. We also took along our television set to three mother and toddler groups and two baby clinics. In this way we hoped to get groups of mothers who were not currently using any other provision. As all this was specifically designed for the parents of pre-school children, we also arranged two showings (one morning and one evening) for the general public , in the community centre. Only one person came to see the programme as a result of seeing one of our posters advertising it.

Showings were arranged by the Local Community Education Officer in a church hall, in the community room of a block of flats and in a private house in a middle-class residential area. Nobody came to the meeting in the

church hall. The meeting in the middle-class home developed into a general discussion. The participants complained about the lack of facilities within walking distance from their homes. It was finally agreed that they, with the assistance of the Community Education Officer, should carry out a survey to see how much demand there was from parents in their immediate vicinity as a prelude to trying to get something started. They placed quesionnaires in the local doctors' surgeries and clinics.

Altogether, 207 mothers completed quesionnaires for us after watching the television recording. 124 (60%) of them gained some information from it. Table 3 illustrates the numbers who gained information about one or more type of facility.

Table 3: Number of mothers who said that they had gained information about the general characteristics of one or more type of facility from the television programme

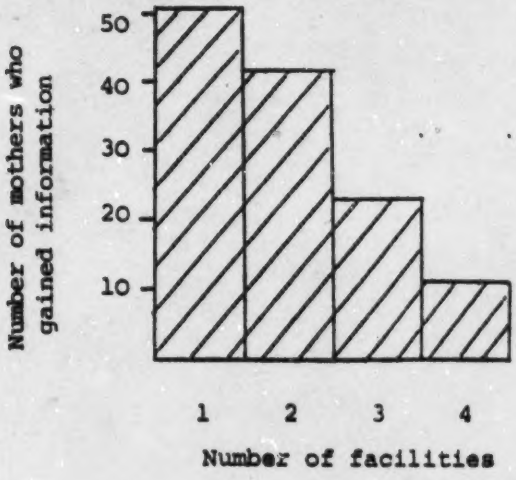

Table 4 shows the number of parents who gained information about the different types of facilities by the type of facility they were currently using. They were less likely to know about day nurseries and childminders than about playgroups and nursery units. More of them were currently taking their children to playgroups and nursery units. However, some parents gained information about the type of facility that their child was currently attending. The fact that mothers attending mother and toddler groups and baby clinics do not gain significantly more information than other groups is perhaps because they have older children as well.

Table 4: Percentage of parents who said that they had gained information about each type of facility by the type of facility they are currently using

Facility child attends	Gained information about a				Number of questionnaires
	Playgroup	Nursery unit	Day nursery	Childminder	
	%	%	%	%	
Playgroup	10	26	32	28	72
Nursery unit	35	23	41	40	81
Day nursery	50	40	23	63	30
M. & T. group	18	12	24	29	17
Other	77	62	46	31	13
Total	63	60	73	80	213

Most of the parents who were currently using some kind of pre-school facility for their child, after seeing the programme, still thought that they were using the most suitable provision. However, there were 7 exceptions.

In addition, forty-four mothers (21%) not currently using any of the pre-school facilities described said that they intended taking their child to one of these places as a result of seeing the programme. Twenty-seven of them said they would be taking their child to a playgroup; twenty-three to a nursery unit; two said that they would be trying to get a place at a day nursery and two would be looking for childminders.

Many other people have watched our television programme. Not only friends, grandparents and playleaders but also health visitors, teachers and social workers. Copies are to be made available to nursing officers for use in training health visitors and to teachers using a resource centre. In this way, the level of knowledge about facilities and therefore, perhaps, mutual understanding have been, and will be increased. This brings us to the fourth phase in our programme of information presentation.

4. General campaign

Ours was not a campaign in the sense of persuading people. We simply wanted to look at the effects of increasing people's level of knowledge. However, once the controlled part of our experiment was over, we were joined in our efforts by some of the people responsible for running the facilities in Leith. A few months earlier we had written to everyone we thought might be interested and invited them to a meeting. At this meeting we explained what we were intending to do and asked for ideas. We suggested that this would be an ideal opportunity for groups

to do something for themselves and we offered as much assistance as was possible. Anything which amounted to advertising facilities during the early part of September, 1978 was welcome.

The ventures had differing degrees of success. The playgroup, the nursery school and the day nursery which were in our television programme, all held an 'Open Week'. Some of them went to considerable lengths to make the place look attractive and to be able to demonstrate their activities to visitors. They advertised and we advertised the open week for them by means of posters in shops, launderettes, hairdressers and so on, all over the area and by announcing it on Radio Forth. However, only two visitors went to the nursery school and none to the playgroup or the day nursery.

We rented a shop in the centre of Leith in order to provide a place to display information about facilities. Playleaders from the local playgroups and others involved with the playgroups in the area, put up a display and manned the shop all week. They answered queries and gave out leaflets. On one morning, they ran a playgroup in the shop. Mothers were invited for a cup of coffee whilst their children played. If they wished, they could discuss provision, but anyway they could see for themselves the kind of activities in which children engaged at playgroups. This was reasonably successful and, although the shop was generally quiet, it was felt that the exercise had been worthwhile.

The most successful venture in terms of numbers was the research team's 'Paint In'. We set up easels and a display with photographs and information in a shopping centre in the middle of Leith on a Saturday morning. Young children were invited to paint a picture and whilst they did so we talked to their parents about pre-school facilities and gave them our information leaflets. When the children had finished, their paintings were hung among the balloons to dry and they were given a badge, which read 'Under 5 in Leith', to wear. By actually being in the street it was possible to also give leaflets to those parents hurrying past without either the time or the inclination to stop and see what was going on.

Finally, we have displayed about 150 posters in various locations. They are intended to draw attention to the fact that pre-school facilities exist in the area. In some cases, we left information leaflets with the posters. We hope that by now every mother of a pre-school child living in Leith at least knows of the existence of childminders, day nurseries, playgroups, nursery schools and nursery classes.

THE EFFECTIVENESS OF DIFFERENT WAYS OF INFORMING PEOPLE ABOUT PRE-SCHOOL FACILITIES

The most important feature of information-giving is that it is a two-way process. People have got to read what you give them, listen to you talking or watch your television programme. Many will not do any of these things. Your chances are increased if you go to them - for example, by putting leaflets through their doors or giving leaflets out in the street - rather than expecting mothers to come to a meeting. The chances of people coming to a meeting are increased if it is seen as a social occasion because they know other people who will be there. Perhaps it is the number of demands made on mothers with young children that accounts for the fact that only 30% of mothers with children at the nursery school where the video-recording was made came to see it when it was finished.

According to our data, 60% of mothers who came said that they had gained information from the television programme, compared with 50% of mothers who said they had gained information from the leaflets.

The influence of our information programme on the actual number and type of applications to pre-school facilities in Leith, that is, the effect on people's actions rather than expressed intention, remains to be seen. We shall report on this in September, 1979.

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41

CHOICE AND A CORE CURRICULUM

A C RYRIE

This paper arises out of a project of the Scottish Council for Research in Education, entitled Awareness of Opportunity. This is what you might call a longitudinal case-study survey. Its purpose is to examine the process by which young people move up through the later stages of schooling and then out of school. The larger part of the funding of the project is by the Scottish Education Department. One of the main characteristics of the project is that it is focussed upon eight schools. We are looking at the process of schooling with reference to the routes which young people follow, the guidance or counselling they receive as they move towards the decisions which are made by or for them, their awareness of the opportunities (or lack of them) which await them, and the eventual outcomes of the process in terms of the destinations to which they go in tertiary education or employment after their schooling is over. And we are looking at these things through the eyes of pupils, of their parents and of teachers and others, and all in the context of a close familiarity with the eight individual schools and their procedures and practices.

The early part of this project has had to do with that part of the schooling process where decisions are made about courses and subjects in the third and fourth years of the Scottish system (which are, of course, equivalent to the fourth and fifth years of the English secondary system). All the schools concerned are six-year comprehensives, taking in pupils from the age of twelve. All except one put pupils into mixed ability classes during the first year, and most do a form of rough streaming in second year. At the end of second year they all go through a procedure known as 'subject choice', in order to determine the subjects to be studied in the third and fourth years. As part of the project we have been examining the procedures for subject choice or course determination in the eight different schools. We have also gathered information about the subjects actually studied by the pupils in our samples in their third year - that is after the course decisions process is over. It is this information which is the basis of the thoughts I want to present to you now. These have to do with the curriculum followed by the pupils in the third and fourth years, and with the question of choice.

The question of the curriculum in these years, and in particular the question of whether there should be a 'core curriculum' of one kind or another, has been a matter of recent debate in Scotland as in England. In Scotland these issues have come to the fore particularly since the publication of two reports: the Munn Committee Report on the Structure of the Curriculum in the third and fourth years of the Scottish Secondary School, and the Dunning Committee Report on assessment. The Munn Report proposed that the curriculum for pupils in the third and fourth years in all schools should consist of a 'core area' and an 'elective area'. The core area should contain seven elements: English, maths, physical education, religious/moral education, science, social studies and creative arts. The elective area should contain a wide variety of options, but these would vary from one school to another. The Dunning Report, issued at the same time, suggested, among other things, that subjects in the third and fourth year curriculum should be available for study at three different levels - credit level, general level and foundation level, that the individual pupil should be able to study different subjects at different levels, according to his ability, and that on this basis it should be possible to provide virtually all pupils with a certificate at the end of their fourth year. These reports have, as I have said, given rise to a lot of discussion

about the curriculum and the process of schooling in the third and fourth years. So it is apt that in the course of our project we should look at the curriculum actually followed by the pupils in our schools during these years.

We may start by asking the preliminary question: To what extent was a core curriculum of the type suggested by the Munn Committee actually followed by the pupils in our samples? As I have said already, this Committee recommended that all pupils should spend some time on each of seven subject areas. Did this happen in these schools? The answer is, first, that the large majority of pupils in each of the schools was officially receiving at least some time allocation within their timetable for each of the seven subject areas. Secondly, there were two subject areas where there was not 100% coverage in all the schools (social subjects and science): but some schools achieved a 90% coverage in science, and some a 100% coverage in social subjects. This suggests that very large adjustment in timetabling and staffing might not be required to provide coverage for all pupils in these subjects. Thirdly, although all had officially some time allocation for aesthetic, physical and religious/moral education, this allocation was often minimal and sometimes did not take place in practice. Thus it seems that the most important need, if this seven-subject core is to be achieved in a real sense, is to provide more time for these minor subjects. And the implications of this in terms of staffing and curricular development are obviously quite considerable.

However, this does not take us terribly far into the basic questions concerning the core curriculum. A more basic question is: To what extent were pupils of different types pursuing different types of courses? Are there any patterns to be observed in the subjects they were studying? In order to answer this question we need to start by looking at the subject options available to pupils when they were about to enter their third year. Each of the eight schools produced a subject option sheet which was given out to pupils and their parents. Even a quick glance at these option sheets would show that they were very much the same in the various schools both in their content and their form. All had vertical columns containing lists of subjects. One subject had to be taken from each column. English was compulsory in every school, and, in addition to a column containing mathematics and arithmetic (sometimes in combination with other things) there were always four other columns. Not only the subjects named in the columns, but the order in which they were listed was very similar in all the schools. Thus it is clear even from such a quick glance at the sheets that the curriculum offered in all the schools was very similar. This curriculum was of course governed by the SCE 'O' Grade syllabus. But it is also clear from the option forms that the subjects have been arranged, intentionally or otherwise, in a rough hierarchy with the more highly valued traditional academic subjects being placed at the top of the columns. The subjects as a whole can, in fact, be roughly divided into four groups. This is shown in Table 1, which is made up on the basis of the eight subject option forms. First there are the traditional academic subjects. Then comes a somewhat varied group of subjects which appear within the 'O' Grade syllabus. Thirdly, there is a small group of practical subjects which are within the 'O' Grade syllabus, but which are generally considered appropriate for the less academic pupils. And lastly there is on some of the sheets a group of non-certificate subjects, or special subjects for the non-academic pupils, which are outwith the 'O' Grade syllabus. It is presumably no accident that in most of the option sheets these subjects are grouped in the columns in the order in which they appear here. So we have referred to these as four orders. Order 1 being the top academic subjects, Order 2 the main body of other 'O' Grade subjects, Order 3 the

largely practical 'O' Grade subjects, and Order 4 the special and non-certificate subjects. This division into orders based on the names of

TABLE 1

Subjects arranged in Orders

Order 1	English	Chemistry
	History	Biology
	Geography	French
	Physics	German
		Other languages
Order 2	Modern Studies	Economics
	Art	Anatomy, physiology & health
	Music	Engineering science
	Secretarial studies	Applied mechanics
	Accounting	Agricultural science
Order 3	Home economics (food & nutrition)	
	Home economics (fashion & fabric)	
	Technical generally	
	Woodwork	
	Metalwork	
Order 4	Commerce	Environmental studies
	General science	Child care
	Social studies	Motor technology
	Classical studies	Leisure/craft
	European studies	Consumer education
		Horticultural studies

the subjects as they appear on the option sheets is obviously a crude one. Nevertheless, we can use it to demonstrate the first point about the patterns in the curriculum. This is that the type of subjects studied varies according to the performance of the pupils during their second year. To show this we have given all pupils Band numbers, representing their average grade across all subjects in second year. Band 1 represents those who averaged A or B, roughly the top 30%; Band 2 those who averaged C, roughly the middle 40%; and Band 3 those who averaged D or E, roughly the bottom 30%. Table 2 now gives the distribution of pupils of different Bands in our first Sample by the numbers of subjects of different orders which they were studying. It shows that the overwhelming majority of Band 1 pupils were doing a course consisting of four or more Order 1 subjects, and very few were doing more than one subject from another Order. Similarly, the majority of Band 2 pupils were doing two, three or four Order 1 subjects, but most were also doing one subject from Order 2 or one from Order 3. These patterns prevailed in all the schools. The Band 3 pupils, however, were doing

subjects more evenly spread across the 4 Orders, the large majority were doing one Order 3 subject and at least one Order 4 subject. The curriculum followed by Band 3 pupils needs closer examination. But before we do that we should note the general point that the curriculum followed by the pupils in the schools is clearly patterned according to their Band, at least as far as the Band 1 and 2 pupils are concerned.

TABLE 2

Numbers of pupils doing various numbers of subjects of different orders, by Band

Numbers of subjects taken

Band 1

	0	1	2	3	4	5+	
Order 1	1	0	7	25	62	97	192
2	98	76	17	1			192
3	158	33		1			192
4	189	3					192

Band 2

Order 1	10	31	60	55	51	19	226
2	57	105	46	15	3		226
3	88	120	18				226
4	183	24	17	2			226

Band 3

Order 1	45	42	21	36	5	1	150
2	51	66	27	5	1		
3	15	102	32	1			150
4	29	49	48	21	3		150

When we come to look more closely at Band 3 we find that although there is no very clear pattern in figures for all the schools together, the position is a little different when we take the schools separately. We do not have time at the moment to go into the details. But it is clear from the option forms and the subjects studied by Band 3 in the different schools that the policies or the approach to the curriculum for these pupils differed from one school to another in two ways, or along two lines. The first had to do with the extent to which Order 4 subjects were available for these pupils. In some schools there was a large group of Order 4 subjects. In others virtually all the subjects were within the 'O' Grade syllabus, that is, were in Orders 1 - 3. This is

a rough indication of a difference of approach to the curriculum for the less academic pupil. In some schools there was an emphasis on providing special subjects, often of a practical or perhaps vocational nature. In other schools the emphasis was on giving the Band 3 pupils as many of the same subjects as their academically more able colleagues, though these might be studied at a simpler level. So there is first a distinction between offering special subjects of a different type, and offering the same subjects but at a different level. The second difference had to do with the extent to which Band 3 pupils tended all to follow a homogeneous course. I can explain this best by referring to Table 3, which shows a typical but simplified subject option form, with Order 1 subjects at the top and Order 4 subjects at the bottom. In some schools

TABLE 3

Typical option form - (simplified)

Mathematics	History	French	Physics	Chemistry
	Geograhy	Biology	Latin	German
	Modern Studies	Secretarial Studies	Music	Engineering Science
		AP & H	Art	
			Accounting	
		Technical	Fashion & Fabric	Food & Nutrition
Arithmetic	Social Studies	Classical Studies	General Science	Leisure/ Crafts
	Motor Technology	European Studies	Commerce	Typing

NB This simplified form does not represent the option sheet of any individual school. In every case English was compulsory, and it was often included in a column of its own. And in every case some subjects were available in more than one column. This simplified version represents only the general format.

all or nearly all the Band 3 pupils took a course which went straight across the option form, with little or no variation in the Order of subjects followed by individual pupils. In other schools there was more flexibility, and individual pupils could take a varied mixture of subjects of different orders. In other words individual pupils could go up and down across the option sheets. Thus when we look not at all the

schools together but at the subjects being studied by Band 3 pupils in the different schools separately, it is clear that in each school there is something of a pattern, more flexible in some schools than in others. The types of subjects studied are still closely related to the Bands of the pupils.

There is another type of pattern in the subjects and this relates to the sex of the pupils. Table 4 shows the numbers in all schools and in

TABLE 4

Numbers studying various subjects, by sex
(both samples together)

	Boys	Girls
Secretarial Studies	6	249
HF, fashion & fabric	1	56
AP & H	7	55
French	160	264
German	17	37
Biology	120	201
Accounting	28	82
HE, food & Nutrition	74	172
Commerce	15	46
Technical general	215	17
Woodwork	51	11
Metalwork	34	1
Building drawing	7	0
Engineering drawing	165	4
Geography	300	220
Physics	271	78

both samples together taking certain subjects. It is clear that some subjects were studied by many more boys than girls and some the other way round. The significance of the figures is increased by the fact that in all of these subjects the same pattern was found in nearly every school and in both samples. Thus secretarial studies, fashion and fabric, and anatomy, physiology and health were very largely girls' subjects, and girls were also in the majority in French, German, biology, accounting, food and nutrition and commerce. Similarly, woodwork, metalwork, building drawing, engineering drawing, and technical generally were overwhelmingly boys' subjects and boys were in the majority in geography and physics.

What I am saying is that the third year curriculum may have something of a 'core' about it when looked at in one way, but when looked at in other ways it can be seen to be different for different types of pupil - for pupils of different performance and pupils of different sex. These patterns in the subjects taken applied across the board to all schools, except in the case of the Band 3 pupils, where the patterns varied from one school to another, according to the curricular approach or philosophy of the school. What this means is that if we know the Band and the sex of any given pupil, and the school which he or she attended, we would be able to forecast within fairly narrow limits the kinds of subjects he or she would be studying.

This leads me on to the final point I want to make - or at least to touch on, because it is impossible to do justice to it at the moment. This is that the extent of real freedom of choice is clearly limited. This may seem an obvious enough point to make, but the way in which the business of choosing subjects is presented to both youngsters and their parents, and the way it is frequently referred to within the educational system often gives the impression that there is a free and open choice available to all, subject only to the limitations of staffing and timetabling. It is instructive not only to note that choice is in fact limited but also to examine a little more closely how the limitations operate. And here I want to make two comments. The first is a general one, which I can only state at the moment, because it would take too long to go into in more detail. It is that pupils take subjects according to prevalent assumptions about what is appropriate for different types of pupils. Certain subjects are generally assumed and understood to be appropriate for the academic pupils and certain other ones for the non-academic pupils. Certain subjects are seen to be appropriate for boys and certain others for girls. There is little evidence that these assumptions are spelled out explicitly to pupils or parents. They are part of the taken-for-granted understandings within the school system. This being the case, pupils need only to know their ability level - and of course their sex - and they will choose within a fairly limited range, according to the accepted assumptions. The numbers of deliberate conscious choices they make are few. The second limitation applies to the less academic pupils - those whom we have called Band 3. There is ample evidence to indicate that they have generally less scope for choice than their fellows. This was generally admitted and acknowledged by the staff whom we interviewed in the schools. It can further be illustrated by Table 5. The

TABLE 5

Numbers of subjects taken which differed from original choices

(both samples)

Band 1	70	17%
2	159	38%
3	191	45%
Total	420	100%

Numbers of 'no-real-choice' subjects

(2nd sample)

Band 1	100	16%
2	213	36%
3	285	48%
	598	100%

first set of figures relates to the total number of occasions where a subject which appeared on a pupil's timetable differed from that pupil's original choice. These figures must be treated with some caution because these alterations may have been made for different reasons and by different people - some of them by the pupil himself. Nevertheless they do seem to indicate that more of the choices made by Band 3 pupils were altered or disallowed. The second set of figures refers to our enquiry about the reasons for pupils' choices. In a number of cases the pupils indicated that they chose a subject only because they felt they had no real alternative, or only because a teacher had recommended or told them to do it. The figures show that there were more of such 'no-real-choice' subjects amongst the Band 3 pupils than amongst the others. Once again this must be treated carefully. It could be claimed that the figures tell us more about the Band 3 pupils than about actual limitations on their choices. But they do indicate that these pupils felt more constrained and limited in their making of choices than the others did. If we were able now to look in more detail at the type of change made by the schools in the subjects chosen by Band 3 pupils, it would become clearer still that they had generally to choose in effect from within a narrow range of subjects. In fact, one headteacher justified this state of affairs on the grounds that these pupils were less able to make choices. This clearly raises some important issues about the purpose of choice within the curriculum.

The implication of all these points is simply this. If it is desirable that all pupils should have an opportunity of genuine free choice within the curriculum, it is not sufficient to have a formal arrangement of options. It is necessary that deliberate effort be made to overcome or counteract the hidden assumptions and pressures which constrain pupils, both in terms of their ability and of their sex. For a formal arrangement of options can still leave untouched a number of hidden or partly hidden processes by which pupils come to study different subjects. And, in particular, if it is believed that choice is an important element of education for all, more deliberate effort must be made to enlarge the area of genuine choice for the less academic pupil.

HOME AND SCHOOL INFLUENCES ON GETTING A JOB

A DOUGLAS WEIR

In these conference papers it has been regularly mentioned that Scotland is a small, compact country and that evidence from one part of its educational system can often be easily generalised to another part. Given that this is so, it is easy to make a number of confident assertions about getting a job in Scotland, assertions based on case study material collected in some areas of Scotland and relevant to areas other than those in which the case studies were conducted. These assertions will hopefully meet a number of local circumstances which prevail in the rest of the United Kingdom.

The work which is presented in this paper is based largely on a number of publications. In the first instance much reference will be made to 'Glad to be Out?' (Weir and Nolan)[1] with supporting evidence being drawn from 'Getting a Trade' (Ryrie and Weir)[2] and with other evidence being drawn from a recent NFER publication entitled 'School and After'[3] which is the account of the Council of Europe Symposium held in Peebles in 1978.

As the title suggests and as these above sources make more than clear, it is considered that the influence of the individual home is the most significant single factor contributing towards the type of job which a young person seeks and secures and that the influence of the school is secondary to that home influence.

What then are these aspects of the home which can be considered to be most important in influencing a young person's job seeking behaviour?

One of the most important factors in this regard is what we may call the family occupational pattern. In other words, where a family consists of a father and a number of brothers who have all had skilled occupations, then that factor will be extremely powerful in determining the job choice of any succeeding boy in the family. Where the family members have had considerable experience of unemployment, then not only will that condition the next family member's view of the labour market but it may also incline that next member to the view that unemployment is something fairly normal and typical; and where the family consists of people with considerable experience of professional occupations, then this too will influence very strongly the young person's aspirations.

Of course it is very seldom that the family occupational typology is as clear-cut as these examples just instanced. Nevertheless in every family there is one prevailing occupational type, often one prevailing industrial type, and the evidence from the major studies quoted above would suggest that that family or industrial type is a very considerable factor.

More and more, however, there is a strong association between occupation and education. So many jobs today are dependent for entry on the school certificates gained and are dependent for progress on the further education and higher education courses attended. Therefore most young people when considering their occupational choices consider at the same time the education that they have been experiencing at the time of choice and the future education which they may have to experience given that choice. It is therefore appropriate to look at a number of dimensions of family educational experience and to consider how they might influence job search and job aspiration.

One of the most simple dimensions to consider in this respect is whether the members of a family have had a good or a bad experience of schooling and post-secondary education. The attitudes which are held in a family towards education will necessarily condition the attitudes of succeeding members of the same family. If the family climate is favourably disposed towards education then the younger members of that family will generally hold a good attitude and will be willing to continue their education and to see an association between their education and their job choice as something essential and even desirable.

A second dimension of educational experience which conditions job choice is the question of how long or how short was the association between previous family members and the educational system. One of the common features of the family experiences of those who stay on at school is that their parents and the other members of their family have similarly been likely to stay on at school beyond the minimum leaving age. On the other hand, where parents have been inclined to leave at the minimum leaving age, irrespective of what that age is, likewise younger members of the family are similarly inclined to leave at the statutory minimum age.

Our researches would indicate, however, that most important of all is the question of how recent or how distant were the educational experiences of family members. If we consider the changes which have taken place in the educational system in the last 20 to 30 years we can see that parental experiences will almost certainly have been considerably different from the experiences of today's sixteen-year-olds. In 'Glad to be Out?'[1] it was demonstrated clearly that the majority of parents of those young people who are today sixteen, left school themselves in the late 1940's at the age of fourteen. That difference is not simply a difference of two years - it masks an even greater difference in curriculum and in the knowledge acquired by the respective parents and children. The vast majority of today's school leavers have experienced a full four-year secondary course, whereas many of their parents, leaving at fourteen, would have experienced merely an addition to the primary school curriculum. Another factor concerning recency and distance of educational experience is the question of school type. Whereas the parents of today's sixteen-year-olds themselves were brought up in a selective secondary school system in Scotland particularly, but also for the majority of pupils in England and Wales, today's sixteen-year-olds are attending a school in some way deserving the label "comprehensive". And finally in this respect, the question of the type of further education is important. In the 1950's it was much more common to have an evening class pattern of attendance for many further education courses than it is today. Today's pattern is much more likely to be a day-release or a full-time further education pattern. Parents without recent contact with further education may therefore imagine a system quite different from that which now exists.

The reason for mentioning these differences in educational experience is because of the evidence in the 'Glad to be Out?'[1] study and also the evidence in the Ethel Venables study, 'Apprentices Out of Their Time'[4]. Both of these make it clear that when families are considering the educational experiences which they wish their children to have, they think very much in terms of their own educational experiences rather than the experiences which are open to young people today. So if we have a group of parents who were accustomed to school leaving at fourteen or fifteen years of age, to a selective secondary school system, and to a largely evening class further education system, it is difficult for them to pass on an appropriate impression of the educational system and its opportunities to their children who are today aged sixteen.

A final factor of home influence which can be considered to be of considerable significance is what would be called the level of family labour market intelligence. In certain families because of the occupational pattern described above, there is a very narrow experience of employment and industrial types. If, for example, all adult members of the family have had experience in the engineering industry, or have had experience in some profession, then it is not easy for them to understand the broader labour market, nor to pass on an understanding of it to their own children. If, on the other hand, there is a family each of whose members has taken up a different occupation in a different industrial area, then within that family there are very broad and often conflicting views of the nature of the labour market and of its opportunities. In the Thomas and Wetherell study[5] of young school leavers it is made very clear that as many families have a very common and therefore narrow experience of the labour market, so it would not be surprising if they passed on a similarly narrow view to their children.

Another dimension which can be used in terms of labour market intelligence is what might be called the likelihood of taking a realistic or dream-like view of possible occupations. In work which is currently being done at the University of Glasgow on behalf of the Manpower Services Commission, an examination is being made of the labour market views held by young people and their parents in contrasting parts of the Strathclyde Region. It has already been observed in this study that where the local area provides examples of a large variety of occupations, then it is much easier for the young person to gain realistic information concerning the types of jobs on offer in his or her locality. Where, however, the local labour market is non-existent, as it almost is in some of the very large housing estates in West Central Scotland, then there are very few occupations which are visible to the individual, and that young person is very likely to persist for a considerable period of time in holding an unattainable job aspiration.

This unrealistic or dream-like aspriation in certain young people is accentuated by a very considerable lack of geographical mobility in Scotland in general and in West Central Scotland in particular. It is considered very unusual to travel more than a few miles in any direction to seek employment. This finding is, of course, more typical of skilled and unskilled workers than it would be of professional workers whose labour market and whose income level oblige and allow them to travel greater distances when choosing employment. For a large number of young people the local labour market is very narrowly considered. It amounts to a few miles in any direction from their home. If, therefore, within that narrowly prescribed area, there is a considerable shortage of occupations and those which are available are lacking in variety, then it is extremely difficult for young people, influenced as they are by their immediate environment and by their family experiences, to make any realistic choice with regard to occupations.

One final dimension on this theme of family labour market intelligence concerns the way in which employment is changing, both in terms of its location, with more and more industries now being placed on the periphery of towns, and also in terms of its nature, with a fairly rapid shift from manufacturing to service-type occupations. It is commonly accepted that describing and passing on the relevant experiences of productive and manufacturing industries is very much easier than describing some of the servicing occupations, particularly those which involve abilities and skills which are much more abstract than concrete. Young

people therefore are disadvantaged in a way in which their parents and grandparents were not. This phenomenon is well demonstrated by Urie Bronfenbrenner[6] when he says "Everybody in the neighbourhood minded your business. If you walked on the railroad tracks the 'phone would ring at your house, and your parents would know what you had done before you got back home. People on the street would tell you to button your jacket and ask why you were not in church last Sunday. Sometimes you liked it, and sometimes you didn't, but at least people cared. You also had the run of the neighbourhood. You were allowed to play in the park. You could go into any store whether you bought anything or not. They would let you go out back where you could watch them unpack the cartons and hope that one would break. At the lumber yard they let you pick up the good scraps of wood."

The same type of phenomenon is demonstrated by Coleman[7] when he observes that one of the major differences between rural and urban young people is that in rural society it is much more common for young people to follow their parents' occupations. He puts a factor of three-to-one on this difference and then goes on, "indeed under conditions of life in many of today's cities and suburbs the adolescent may never have seen anybody actually performing the type of work he is considering upon completion of his education".

Much play is made in the media on the so-called generation gap. Whether or not this generation gap is a significant phenomenon across the whole of a young person's experiences, there seems to be little doubt that it has a small influence on the school-to-work transition. In that area of their experiences young people are very quick to acknowledge the contact between themselves and the rest of their family. All the material which has been referred to makes it clear that a very significant influence on a young person's occupational decisions is the patterns, experiences and understandings of his parents and other older members of his or her own family.

As has already been mentioned, however, there is certainly a school influence on getting a job, and here too a number of factors which contribute towards this particular influence can be highlighted.

In the paper by Sandy Ryrie it is made clear that there are a number of curricular variants from which young people in Scotland can choose their own particular set of courses or, to be more precise, into which young people can be assigned or persuaded. It is therefore superfluous to comment further on the academic/practical curricular dimension which has been mentioned in that paper. Nor I think is it necessary to dwell on the other dimension of broad or narrow curriculum. On that latter point, however, it should be said that the current debate concerning a core curriculum should take into account the question of the vocational objectives of the secondary school, and whether indeed there should be any such objectives at all. Where the secondary school course contains a wide variety of topics which are offered to all young people, then their opportunities for vocational decision-making are increased. Where, on the other hand, the secondary school time-tablers or curriculum planners decide in advance that there are certain types of pupil to whom certain combinations of courses should be offered, then it must be recognised that that decision will affect the occupational choices available to these young people and will affect their job-seeking behaviour.

One other dimension on curriculum which has not yet been discussed, is the topic of participation. Here attention should be drawn to work of

Wiseman[8] in the Manchester area. "By linking method and curriculum to the interests of the pupil and by encouraging active exploration and participation rather than the passive acceptance of formalised instruction, the school becomes a more attractive place".

This makes it clear that where the school is intent on involving young people in decision making of one sort or another, that involvement is likely to advantage these young people when they reach the stage of making vocational decisions.

In addition to the question of curriculum as an influence on job seeking, it is obvious that the nature of a school's intake and the way that intake is organised, must inevitably influence young people's decisions about seeking work. As has been mentioned earlier, there are many definitions of what constitutes a comprehensive school. In a number of Scottish studies the neighbourhood nature of comprehensive schools has been highlighted as a factor reducing the vocational decisions open to young people. Just as when talking about the home, it was mentioned that in housing estates there is a very homogeneous population - homogeneous in social class and in industrial experience - so too in talking about the neighbourhood comprehensive school in these housing estates the same observation must be made. Where, on the other hand, the local comprehensive school has a catchment area which crosses a number of neighbourhoods, or where, as is typical in Scotland, one comprehensive school serves a whole community, then within that school the intake will represent almost all the occupational opportunities in that neighbourhood. The young person therefore is liable to gain access through his peers to a much wider variety of occupational experiences than where the comprehensive school serves a very narrowly prescribed neighbourhood.

It is not only important, however, to consider the nature of a school's intake. Consideration must also be given to the way in which that intake is organised. There are many comprehensive schools throughout the United Kingdom where the internal organisation of the school still mirrors the previous selective system. Pupils, from their first year, or in some cases from their second year, are divided into fairly rigid streams and, of course, the composition of these streams reflects a number of family background variables. Whatever the nature of the neighbourhood from which such streamed schools draw their pupils, therefore, the heterogeneity which might otherwise prevail is restricted by the amount of rigidity in the streaming system used internally.

Where, on the other hand, the school practises a mixed ability policy, then irrespective of the ability level or social class characteristics of individual pupils, their chances of being members of teaching groups which represent a heterogeneous family and occupational background are raised. It could therefore be concluded that mixed ability systems operated by comprehensive secondary schools are more likely to enhance the job-seeking and the job-finding sophistication of individual pupils. If, in addition, it is noted that mixed ability structures are more commonly associated with a large common core in curricular provision, then there is a reinforcement of the occupational opportunity provided for individual pupils.

But above all, a school's influence on young people who are seeking a job, is dependent on how its teaching and pastoral care systems emphasise vocational education rather than vocational training or preparation.

In a world where manpower planning is difficult, if not impossible, and where the rate of change in the actual jobs is increasing, young people need an attitude of mind rather than specific job skills and so general education is a better bet for future occupational decision-making than is vocational training. Of course the present staffing and curricular structures of secondary schools make it difficult to diminish the amount of vocational preparation quickly, and indeed it is questionable whether the attitude of mind favourable towards general education is present at this time in the teaching force. If, however, a gradual change from vocational to general preparation is now decided upon, there are a number of features of the provision of many secondary schools which can be extended slowly in order to make this desired change.

Many secondary schools already have within their programme for less-able pupils a work experience scheme, a link course with the local further education college, a careers programme involving the careers service and pastoral staff, a series of industrial visits and many other of the aspects of a vocational preparation programme. At the same time these schools often operate a well-considered system for more-able pupils, offering relevant experiences in a range of academic subjects, but always with the assumption that these pupils are aiming for higher education places. The important change which is required, however, is to ensure that this education with its variety and its diversity is offered to all pupils. In this way not only would academic pupils gain a different vocational insight, but less-able pupils would be given a greater opportunity to develop some academic talent.

The pupil whose secondary courses are all drawn from the academic subjects, whether on the science or the language side, is being exposed just as much to a narrow form of vocational preparation as is the pupil whose courses emphasise the domestic, commercial or technical subjects. The programme of association between the school and industry which has been mentioned immediately above, has to be seen not in isolation from the rest of the curriculum, but as a necessary adjunct to the broad core curriculum which has already been advocated.

In 'Glad to be Out?'[1] an indication of the ground which still has to be covered by the secondary school is given. Of all the types of school/work liaison which have already been mentioned, only 58% of the pupils in that sample of early leavers had experienced any one and only 30% of the pupils had experienced more than one.

If, however, we wish to see the secondary school influence moving away from the vocational aspect towards the more general preparation, a great deal of parental resistance will have to be overcome. Returning to the comments which have already been made on parental influence, it is obvious that parents' understanding of the labour market and labour market changes is likely to be stuck in the experiences which they themselves have had. If they are accustomed to thinking of a labour market which has a considerable amount of traditional-type occupations on offer, then they are going to consider that the school is failing in its primary task if it does not directly prepare their children for gaining employment in these occupations.

Behind all this discussion lies the assumption that one of the primary tasks of the education system is to improve the quality of adult understanding. Given that so many of the attitudes and behaviours which

young people pick up are directly attributable to their own families, then until the family attitudes can be made more up-to-date, any attempts by, for example, the education system, to change young people's views on the industrial future, are likely to meet with little success.

When the adults in half of all families make no attempt to visit the secondary schools which their children attend and when the number of parents from the lower socio-economic groups who have ever taken formal or informal further education is tiny, then it is extremely difficult to imagine that any attempt to facilitate a significant change in attitudes will succeed. In a very significant Scottish study, Catherine Lindsay[9] compared schools where a greater or lesser attempt was made to involve the parents in the education system and in the decision-making of the pupils. She reports, "In the school where there had been less consultation with parents, the range of job ambitions for the children was narrower and closer to the types of occupation already present in the home background".

It is not, however, sufficient to seek to bring parents more in contact with the school. It is equally necessary for education to go out much more into the community and to ensure that whatever the views and messages are which education wishes to purvey, then these views and messages are presented in an aggressive fashion to members of the community wherever they may be.

Of course it is no longer one of these messages that early entry to permanent employment is what most young people can expect. With the structural changes which are prevalent in the labour market, and with the polarisation which is likely in employment between those who are highly skilled and those who are highly de-skilled, teachers, parents and young people alike have to recognise the prospect of considerable unemployment for all young people between now and the end of this century.

Such a prospect of future unemployment can only be countered if the need for more general education is recognised by teachers, parents and young people. Then it is possible that the very low proportion of British young people staying on in full time education beyond the minimum leaving age may increase. It is well known that on the international league table Great Britain stands near the bottom on this particular parameter. Many other Western countries are making a much better attempt to overcome their economic difficulties than we in Britain are and one reason which is often given for this greater success is the attention which many of these countries are giving to expanding education, particularly general education, among their young people.

The cynic may say that these policies are merely designed to temporarily reduce the figures of youth unemployment, but the more charitable observer notes that these countries have also been better able to move manpower about from one section of the labour market to another as demand rises and falls. This ability to move labour is attributable in large part to the greater ability and flexibility which is present in their labour force and that itself, in turn, is attributable to a longer period of more general education to which most of their young people are exposed. There is little doubt that the Swedish and Japanese economies have benefited considerably from the very large numbers of young people in these countries who continue their general education to at least the age of 19.

The future for young people seeking employment is more and more in terms of improving their general standards and, furthermore, in recognising that there are other things in life than work. Of course, into the

foreseeable future, we will still attempt to provide employment for all people who wish it, but that employment will probably have to be available within the terms of a shorter working week, a shorter working year and a shorter working life. Each person in the future will have to adapt, therefore, to a much increased proportion of leisure time in their lives. Families and schools alike will have to assist in preparing young people for these very significant changes in the opportunities which are available to them.

We, in Britain, have a long history of using our knowledge and experience to maintain our economic position. If we wish to continue that tradition then we have to recognise the influences on young people's occupational decision-making and the changes likely in our labour market. It is essential to combine both of these pieces of understanding to ensure that family influence is directed towards the future rather than towards the past.

Education is not simply there to help people get a job. Allowing people to see their lives only in job terms is likely to produce even more antagonism to schools than exists at present. This is so because while, at the moment, six out of seven young people can find employment on leaving school, and therefore consider the vocational preparation which they have received to have been in most senses adequate, that will not be the case if only three out of four or three out of five young people can move directly into employment at the age of sixteen. That change in the proportion moving into employment will force young people to ask questions about the way in which school prepared them for life beyond school.

But as has already been mentioned, one of the primary tasks of the education service must be to improve adult understanding of the knowledge explosion and technological revolution. Teachers and parents together, therefore, have the responsibility for assisting young people to see knowledge itself, rather than jobs alone, as a guarantee of greater life satisfaction.

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